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Full Isomer-Tables of Inositol-Oligomers up to Tetramers

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Abstract

All possible combinations and stereoisomers of the known nine inositols in their dimers, trimers and tetramers have been calculated and are presented in tables. The respective achiral numbers are also given. Cumulative estimations of the number of possible linear pentamers, hexamers, heptamers, octamers and nonamers are included.

Introduction

In a recent contribution[1] we detailed the approaches and formulas for the number of tetramers of a selected subset of the known nine inositols, namely D- and L-*chiro-*, *muco-* and *neo*-inositols. For a preparative chemist however, there is probably the need to know in a detailed manner, how many stereoisomers are there to be expected for a linear tetramer made of two central *epi-* and two attached *scyllo-* inositols or for a branched tetramer made from a central *allo-* with two *neo-* and one *cis*-inositol attached ?

The respective basics are given in the preceding paper[1]. Here we will just present the results in the form of comprehensive tables.

Calculations

The basis for all these estimations and procedures are the results from calculations with the MATHEMATICA - AddOn "ISOMERS"[2]. For the sake of clarity, we will first again present the general substitutional possibilities at inositols:

Inositol	Abbr	mono	achir	di-s	achir	di-as	achir	AAA	achir	AAB	achir	ABC	achir
allo	a	6	0	15	3	30	0	20	0	60	0	120	0
cis	c	1	1	3	3	5	1	4	2	10	2	20	0
D-*chiro*	d	3	0	9	0	15	0	10	0	30	0	60	0
epi	e	6	2	15	3	30	2	20	4	60	4	120	0
L-*chiro*	l	3	0	9	0	15	0	10	0	30	0	60	0
muco	m	3	1	9	3	15	1	10	2	30	2	60	0
neo	n	3	1	9	3	15	1	10	2	30	2	60	0
scyllo	s	1	1	4	2	5	1	4	2	10	2	20	0
myo	y	6	2	15	3	30	2	20	4	60	4	120	0

Table I: Basic Substitutional Possibilities at all Nine Inositols

Within the following tables, we will use the abbreviations given under "Abbr" in *Table I*. Small letters will be used for inositols acting as substituents (ligands), while capital letters will be used for central (di- or tri-substituted) inositols. The substitutional possibilities are always given in the order: Sum of stereoisomers, achiral (*meso*-) forms thereof. Thus "mono" represents the monosubstitutional possibilities of the respective inositols, "achir" the achiral fraction thereof. With disubstitution, we have to distinguish between symmetrical ("di-s") and asymmetrical ("di-as") forms. Symmetrical in this context means structural symmetry (i.e. exactly position 1 at *muco* = muco_1), and not identity of inositols (i.e. just *muco*, regardless of the position at the latter, see discussion under dimers below). Similarly, there are three possibilities of trisubstitution presented in *Table I* by the acronyms AAA, AAB and ABC.

Dimers:

With the help of these numbers all possible dimers **x-y** can be calculated according to the following general formulas: Number of dimers of identical inositols: $\text{mono}_x * (\text{mono}_x + 1) / 2$. This sum results from a contribution of structurally symmetrical dimers, i.e. muco_1 & muco_1 (from those there exist exactly mono_x isomers) plus the fraction of structurally asymmetrical combinations of two "identical" inositols, i.e. muco_2 and muco_3. For the latter there are $\text{mono}_x * (\text{mono}_x - 1) / 2$ isomers. For dimers of different inositols the formula logically is: mono$_x$ * mono$_y$; **x** and **y** are indicating the respective inositols. The same formulas are valid for the achiral forms thereof, with the exception of the **d-l** - pair, which yields three *meso*-forms as well as all dimers of identical inositols, which have to be evaluated individually according to their number of enantiotopic monopositions and the number of monopositions located in the plane of symmetry (see [1]).

Dimer		*Number of Isomers*	*Achirals*
x	*y*		
a	**a**	21	3
a	**c**	6	0
a	**d**	18	0
a	**e**	36	0
a	**l**	18	0
a	**m**	18	0
a	**n**	18	0
a	**s**	6	0
a	**y**	36	0
c	**c**	1	1
c	**d**	3	0
c	**e**	6	2
c	**l**	3	0
c	**m**	3	1
c	**n**	3	1
c	**s**	1	1
c	**y**	6	2
d	**d**	6	0
d	**e**	18	0
d	**l**	9	3
d	**m**	9	0
d	**n**	9	0
d	**s**	3	0
d	**y**	18	0
e	**e**	21	4
e	**l**	18	0
e	**m**	18	2
e	**n**	18	2
e	**s**	6	2
e	**y**	36	4
l	**l**	6	0
l	**m**	9	0
l	**n**	9	0
l	**s**	3	0
l	**y**	18	0
m	**m**	6	2
m	**n**	9	1
m	**s**	3	1
m	**y**	18	2
n	**n**	6	2
n	**s**	3	1
n	**y**	18	2
s	**s**	1	1
s	**y**	6	2
y	**y**	21	4
Sum			
45		528	46

Table II: Number of Inositol Dimers and Achiral meso Forms thereof

As can be seen from *Table II*, there are 45 general types of inositol dimers, yielding 528 stereoisomers and 46 achiral *meso* forms in total. The overall sum of dimers can also be generated by taking the general formula [n * (n + 1) / 2] with n = the sum of all monopositions possible (32).

Trimers:

For inositol trimers the following considerations are valid: Trimers of the general form **x-Y-x** have to be split into the really symmetrical forms **x-Y-x** (**x** being the same monosubstitutional position, e.g. *muco*_1) and **x-Y-x'**, where **x'** is still the same inositol as **x**, but with a different monoposition (e.g. *neo*_1 and *neo*_3). For the former, the number of isomers is given by: $\text{mono}_x * \text{di-s}_Y$, while for the latter it is: $\text{mono}_x * \text{di-as}_Y * (\text{mono}_x - 1) / 2$. Within the tables, these terms again are combined to one sum. For trimers of the general form **x-Y-z** the number of isomers is: $\text{mono}_x * \text{di-as}_Y * \text{mono}_z$. The results are summarized in *Table III*. As can be seen from this compilation, there are 405 general trimers which yield 82,176 isomers, 630 thereof are achiral. The achiral isomers again have to be evaluated individually by carefully examining the symmetrical isomers as well as those with **d-l** - pairs.

Linear Tetramers:

Here again one has to distinguish between two basic forms: Symmetrical cases of the general pattern: **x-Y-Y-x** or **x-X-X-x** and asymmetrical forms which are considered below. For symmetrical tetramers, the following formulas are applied: $\text{mono}_x * \text{di-as}_Y * (\text{mono}_x * \text{di-as}_Y + 1) / 2$ or $\text{mono}_x * \text{di-as}_X * (\text{mono}_x * \text{di-as}_X + 1) / 2$ respectively. For asymmetrical general patterns like **x-Y-Z-o**, the following formula is valid: $\text{mono}_x * \text{di-as}_Y * \text{di-as}_Z * \text{mono}_o$. The results are summarized in *Table IV*. From this table we learn, that there are 3,321 general patterns of linear inositol tetramers, yielding 13,109,760 stereoisomers, of which we estimate 3,377 to be achiral. The cumulative number of isomers can also be obtained by taking the sum of monosubstitutional possibilities at the nine inositols (32) times the sum of the asymmetrical disubstitutional possibilities at those (160) and taking the half matrix including the diagonal of this product (5,120): 5,120 * 5,121 / 2 = 13,109,760. For the achiral forms thereof, no general formula can be given because some of the central dimers to which two ligands (inositols) are attached are *meso* forms built from a pair of enantiomers (in the case of D- and L-*chiro*-inositols) or a pair of enantiotopic mono-positions at some inositols with a plane of symmetry (symmetrical dimers of *allo*-, *epi*-, *muco*-, *neo*- and *myo*-inositols) as indicated already within the discussion of the dimers. To such dimers, besides the "normal" achiral positions of inositols again there can be attached either a **d-l** - pair or a pair of interrelated enantiotopic monopositions of identical inositols to yield achiral *meso* forms. So, tetramers containing **D-L** or symmetrical central dimers as well as attached ligands of this specific pairwise patterns have to be examined carefully for possible achiral *meso* forms.

Tri			Iso	Ach	Tri			Iso	Ach	Tri			Iso	Ach
a	A	a	540	9	a	C	a	93	9	a	D	a	279	0
a	A	c	180	0	a	C	c	30	0	a	D	c	90	0
a	A	d	540	0	a	C	d	90	0	a	D	d	270	0
a	A	e	1080	0	a	C	e	180	0	a	D	e	540	0
a	A	l	540	0	a	C	l	90	0	a	D	l	270	0
a	A	m	540	0	a	C	m	90	0	a	D	m	270	0
a	A	n	540	0	a	C	n	90	0	a	D	n	270	0
a	A	s	180	0	a	C	s	30	0	a	D	s	90	0
a	A	y	1080	0	a	C	y	180	0	a	D	y	540	0
c	A	c	15	3	c	C	c	3	3	c	D	c	9	0
c	A	d	90	0	c	C	d	15	0	c	D	d	45	0
c	A	e	180	0	c	C	e	30	2	c	D	e	90	0
c	A	l	90	0	c	C	l	15	0	c	D	l	45	0
c	A	m	90	0	c	C	m	15	1	c	D	m	45	0
c	A	n	90	0	c	C	n	15	1	c	D	n	45	0
c	A	s	30	0	c	C	s	5	1	c	D	s	15	0
c	A	y	180	0	c	C	y	30	2	c	D	y	90	0
d	A	d	135	0	d	C	d	24	0	d	D	d	72	0
d	A	e	540	0	d	C	e	90	0	d	D	e	270	0
d	A	l	270	9	d	C	l	45	9	d	D	l	135	0
d	A	m	270	0	d	C	m	45	0	d	D	m	135	0
d	A	n	270	0	d	C	n	45	0	d	D	n	135	0
d	A	s	90	0	d	C	s	15	0	d	D	s	45	0
d	A	y	540	0	d	C	y	90	0	d	D	y	270	0
e	A	e	540	12	e	C	e	93	12	e	D	e	279	0
e	A	l	540	0	e	C	l	90	0	e	D	l	270	0
e	A	m	540	0	e	C	m	90	2	e	D	m	270	0
e	A	n	540	0	e	C	n	90	2	e	D	n	270	0
e	A	s	180	0	e	C	s	30	2	e	D	s	90	0
e	A	y	1080	0	e	C	y	180	4	e	D	y	540	0
l	A	l	135	0	l	C	l	24	0	l	D	l	72	0
l	A	m	270	0	l	C	m	45	0	l	D	m	135	0
l	A	n	270	0	l	C	n	45	0	l	D	n	135	0
l	A	s	90	0	l	C	s	15	0	l	D	s	45	0
l	A	y	540	0	l	C	y	90	0	l	D	y	270	0
m	A	m	135	9	m	C	m	24	3	m	D	m	72	0
m	A	n	270	0	m	C	n	45	1	m	D	n	135	0
m	A	s	90	0	m	C	s	15	1	m	D	s	45	0
m	A	y	540	0	m	C	y	90	2	m	D	y	270	0
n	A	n	135	9	n	C	n	24	3	n	D	n	72	0
n	A	s	90	0	n	C	s	15	1	n	D	s	45	0
n	A	y	540	0	n	C	y	90	2	n	D	y	270	0
s	A	s	15	3	s	C	s	3	3	s	D	s	9	0
s	A	y	180	0	s	C	y	30	2	s	D	y	90	0
y	A	y	540	12	y	C	y	93	6	y	D	y	279	0

Tri			Iso	Ach	Tri			Iso	Ach	Tri			Iso	Ach
a	E	a	540	9	a	L	a	279	0	a	M	a	279	9
a	E	c	180	0	a	L	c	90	0	a	M	c	90	0
a	E	d	540	0	a	L	d	270	0	a	M	d	270	0
a	E	e	1080	0	a	L	e	540	0	a	M	e	540	0
a	E	l	540	0	a	L	l	270	0	a	M	l	270	0
a	E	m	540	0	a	L	m	270	0	a	M	m	270	0
a	E	n	540	0	a	L	n	270	0	a	M	n	270	0
a	E	s	180	0	a	L	s	90	0	a	M	s	90	0
a	E	y	1080	0	a	L	y	540	0	a	M	y	540	0
c	E	c	15	3	c	L	c	9	0	c	M	c	9	3
c	E	d	90	0	c	L	d	45	0	c	M	d	45	0
c	E	e	180	4	c	L	e	90	0	c	M	e	90	2
c	E	l	90	0	c	L	l	45	0	c	M	l	45	0
c	E	m	90	2	c	L	m	45	0	c	M	m	45	1
c	E	n	90	2	c	L	n	45	0	c	M	n	45	1
c	E	s	30	2	c	L	s	15	0	c	M	s	15	1
c	E	y	180	4	c	L	y	90	0	c	M	y	90	2
d	E	d	135	0	d	L	d	72	0	d	M	d	72	0
d	E	e	540	0	d	L	e	270	0	d	M	e	270	0
d	E	l	270	9	d	L	l	135	0	d	M	l	135	9
d	E	m	270	0	d	L	m	135	0	d	M	m	135	0
d	E	n	270	0	d	L	n	135	0	d	M	n	135	0
d	E	s	90	0	d	L	s	45	0	d	M	s	45	0
d	E	y	540	0	d	L	y	270	0	d	M	y	270	0
e	E	e	540	12	e	L	e	279	0	e	M	e	279	12
e	E	l	540	0	e	L	l	270	0	e	M	l	270	0
e	E	m	540	4	e	L	m	270	0	e	M	m	270	2
e	E	n	540	4	e	L	n	270	0	e	M	n	270	2
e	E	s	180	4	e	L	s	90	0	e	M	s	90	2
e	E	y	1080	8	e	L	y	540	0	e	M	y	540	4
l	E	l	135	0	l	L	l	72	0	l	M	l	72	0
l	E	m	270	0	l	L	m	135	0	l	M	m	135	0
l	E	n	270	0	l	L	n	135	0	l	M	n	135	0
l	E	s	90	0	l	L	s	45	0	l	M	s	45	0
l	E	y	540	0	l	L	y	270	0	l	M	y	270	0
m	E	m	135	9	m	L	m	72	0	m	M	m	72	9
m	E	n	270	2	m	L	n	135	0	m	M	n	135	1
m	E	s	90	2	m	L	s	45	0	m	M	s	45	1
m	E	y	540	4	m	L	y	270	0	m	M	y	270	2
n	E	n	135	9	n	L	n	72	0	n	M	n	72	9
n	E	s	90	2	n	L	s	45	0	n	M	s	45	1
n	E	y	540	4	n	L	y	270	0	n	M	y	270	2
s	E	s	15	3	s	L	s	9	0	s	M	s	9	3
s	E	y	180	4	s	L	y	90	0	s	M	y	90	2
y	E	y	540	12	y	L	y	279	0	y	M	y	279	12

Tri			Iso	Ach	Tri			Iso	Ach	Tri			Iso	Ach
a	N	a	279	9	a	S	a	99	6	a	Y	a	540	9
a	N	c	90	0	a	S	c	30	0	a	Y	c	180	0
a	N	d	270	0	a	S	d	90	0	a	Y	d	540	0
a	N	e	540	0	a	S	e	180	0	a	Y	e	1080	0
a	N	l	270	0	a	S	l	90	0	a	Y	l	540	0
a	N	m	270	0	a	S	m	90	0	a	Y	m	540	0
a	N	n	270	0	a	S	n	90	0	a	Y	n	540	0
a	N	s	90	0	a	S	s	30	0	a	Y	s	180	0
a	N	y	540	0	a	S	y	180	0	a	Y	y	1080	0
c	N	c	9	3	c	S	c	4	2	c	Y	c	15	3
c	N	d	45	0	c	S	d	15	0	c	Y	d	90	0
c	N	e	90	2	c	S	e	30	2	c	Y	e	180	4
c	N	l	45	0	c	S	l	15	0	c	Y	l	90	0
c	N	m	45	1	c	S	m	15	1	c	Y	m	90	2
c	N	n	45	1	c	S	n	15	1	c	Y	n	90	2
c	N	s	15	1	c	S	s	5	1	c	Y	s	30	2
c	N	y	90	2	c	S	y	30	2	c	Y	y	180	4
d	N	d	72	0	d	S	d	27	0	d	Y	d	135	0
d	N	e	270	0	d	S	e	90	0	d	Y	e	540	0
d	N	l	135	9	d	S	l	45	6	d	Y	l	270	9
d	N	m	135	0	d	S	m	45	0	d	Y	m	270	0
d	N	n	135	0	d	S	n	45	0	d	Y	n	270	0
d	N	s	45	0	d	S	s	15	0	d	Y	s	90	0
d	N	y	270	0	d	S	y	90	0	d	Y	y	540	0
e	N	e	279	12	e	S	e	99	8	e	Y	e	540	12
e	N	l	270	0	e	S	l	90	0	e	Y	l	540	0
e	N	m	270	2	e	S	m	90	2	e	Y	m	540	4
e	N	n	270	2	e	S	n	90	2	e	Y	n	540	4
e	N	s	90	2	e	S	s	30	2	e	Y	s	180	4
e	N	y	540	4	e	S	y	180	4	e	Y	y	1080	8
l	N	l	72	0	l	S	l	27	0	l	Y	l	135	0
l	N	m	135	0	l	S	m	45	0	l	Y	m	270	0
l	N	n	135	0	l	S	n	45	0	l	Y	n	270	0
l	N	s	45	0	l	S	s	15	0	l	Y	s	90	0
l	N	y	270	0	l	S	y	90	0	l	Y	y	540	0
m	N	m	72	9	m	S	m	27	6	m	Y	m	135	9
m	N	n	135	1	m	S	n	45	1	m	Y	n	270	2
m	N	s	45	1	m	S	s	15	1	m	Y	s	90	2
m	N	y	270	2	m	S	y	90	2	m	Y	y	540	4
n	N	n	72	9	n	S	n	27	6	n	Y	n	135	9
n	N	s	45	1	n	S	s	15	1	n	Y	s	90	2
n	N	y	270	2	n	S	y	90	2	n	Y	y	540	4
s	N	s	9	3	s	S	s	4	2	s	Y	s	15	3
s	N	y	90	2	s	S	y	30	2	s	Y	y	180	4
y	N	y	279	12	y	S	y	99	8	y	Y	y	540	12

Table III: All Linear Inositol Trimers, their Stereoisomer Numbers and Achiral meso-forms

Tetr	Iso	Ac	Tetr	Iso	Ac	Tetr	Iso	Ac	Tetr	Iso	Ac	Tetr	Iso	Ac	Tetr	Iso	Ac	Tetr	Iso	Ac	Tetr	Iso	Ac	Tetr	Iso	Ac
AA			AC			AD			AE			AL			AM			AN			AS			AY		
a A A a	16290	45	a A C a	5400	0	a A D a	16200	0	a A E a	32400	0	a A L a	16200	0	a A M a	16200	0	a A N a	16200	0	a A S a	5400	0	a A Y a	32400	0
a A A c	5400	0	a A C c	900	0	a A D c	2700	0	a A E c	5400	0	a A L c	2700	0	a A M c	2700	0	a A N c	2700	0	a A S c	900	0	a A Y c	5400	0
a A A d	16200	0	a A C d	2700	0	a A D d	8100	0	a A E d	16200	0	a A L d	8100	0	a A M d	8100	0	a A N d	8100	0	a A S d	2700	0	a A Y d	16200	0
a A A e	32400	0	a A C e	5400	0	a A D e	16200	0	a A E e	32400	0	a A L e	16200	0	a A M e	16200	0	a A N e	16200	0	a A S e	5400	0	a A Y e	32400	0
a A A l	16200	0	a A C l	2700	0	a A D l	8100	0	a A E l	16200	0	a A L l	8100	0	a A M l	8100	0	a A N l	8100	0	a A S l	2700	0	a A Y l	16200	0
a A A m	16200	0	a A C m	2700	0	a A D m	8100	0	a A E m	16200	0	a A L m	8100	0	a A M m	8100	0	a A N m	8100	0	a A S m	2700	0	a A Y m	16200	0
a A A n	16200	0	a A C n	2700	0	a A D n	8100	0	a A E n	16200	0	a A L n	8100	0	a A M n	8100	0	a A N n	8100	0	a A S n	2700	0	a A Y n	16200	0
a A A s	5400	0	a A C s	900	0	a A D s	2700	0	a A E s	5400	0	a A L s	2700	0	a A M s	2700	0	a A N s	2700	0	a A S s	900	0	a A Y s	5400	0
a A A y	32400	0	a A C y	5400	0	a A D y	16200	0	a A E y	32400	0	a A L y	16200	0	a A M y	16200	0	a A N y	16200	0	a A S y	5400	0	a A Y y	32400	0
c A A c	465	15	c A C c	150	0	c A D c	450	0	c A E c	900	0	c A L c	450	0	c A M c	450	0	c A N c	450	0	c A S c	150	0	c A Y c	900	0
c A A d	2700	0	c A C d	450	0	c A D d	1350	0	c A E d	2700	0	c A L d	1350	0	c A M d	1350	0	c A N d	1350	0	c A S d	450	0	c A Y d	2700	0
c A A e	5400	0	c A C e	900	0	c A D e	2700	0	c A E e	5400	0	c A L e	2700	0	c A M e	2700	0	c A N e	2700	0	c A S e	900	0	c A Y e	5400	0
c A A l	2700	0	c A C l	450	0	c A D l	1350	0	c A E l	2700	0	c A L l	1350	0	c A M l	1350	0	c A N l	1350	0	c A S l	450	0	c A Y l	2700	0
c A A m	2700	0	c A C m	450	0	c A D m	1350	0	c A E m	2700	0	c A L m	1350	0	c A M m	1350	0	c A N m	1350	0	c A S m	450	0	c A Y m	2700	0
c A A n	2700	0	c A C n	450	0	c A D n	1350	0	c A E n	2700	0	c A L n	1350	0	c A M n	1350	0	c A N n	1350	0	c A S n	450	0	c A Y n	2700	0
c A A s	900	0	c A C s	150	0	c A D s	450	0	c A E s	900	0	c A L s	450	0	c A M s	450	0	c A N s	450	0	c A S s	150	0	c A Y s	900	0
c A A y	5400	0	c A C y	900	0	c A D y	2700	0	c A E y	5400	0	c A L y	2700	0	c A M y	2700	0	c A N y	2700	0	c A S y	900	0	c A Y y	5400	0
d A A d	4095	0	d A C d	1350	0	d A D d	4050	0	d A E d	8100	0	d A L d	4050	0	d A M d	4050	0	d A N d	4050	0	d A S d	1350	0	d A Y d	8100	0
d A A e	16200	0	d A C e	2700	0	d A D e	8100	0	d A E e	16200	0	d A L e	8100	0	d A M e	8100	0	d A N e	8100	0	d A S e	2700	0	d A Y e	16200	0
d A A l	8100	45	d A C l	1350	0	d A D l	4050	0	d A E l	8100	0	d A L l	4050	0	d A M l	4050	0	d A N l	4050	0	d A S l	1350	0	d A Y l	8100	0
d A A m	8100	0	d A C m	1350	0	d A D m	4050	0	d A E m	8100	0	d A L m	4050	0	d A M m	4050	0	d A N m	4050	0	d A S m	1350	0	d A Y m	8100	0
d A A n	8100	0	d A C n	1350	0	d A D n	4050	0	d A E n	8100	0	d A L n	4050	0	d A M n	4050	0	d A N n	4050	0	d A S n	1350	0	d A Y n	8100	0
d A A s	2700	0	d A C s	450	0	d A D s	1350	0	d A E s	2700	0	d A L s	1350	0	d A M s	1350	0	d A N s	1350	0	d A S s	450	0	d A Y s	2700	0
d A A y	16200	0	d A C y	2700	0	d A D y	8100	0	d A E y	16200	0	d A L y	8100	0	d A M y	8100	0	d A N y	8100	0	d A S y	2700	0	d A Y y	16200	0
e A A e	16290	60	e A C e	5400	0	e A D e	16200	0	e A E e	32400	0	e A L e	16200	0	e A M e	16200	0	e A N e	16200	0	e A S e	5400	0	e A Y e	32400	0
e A A l	16200	0	e A C l	2700	0	e A D l	8100	0	e A E l	16200	0	e A L l	8100	0	e A M l	8100	0	e A N l	8100	0	e A S l	2700	0	e A Y l	16200	0
e A A m	16200	0	e A C m	2700	0	e A D m	8100	0	e A E m	16200	0	e A L m	8100	0	e A M m	8100	0	e A N m	8100	0	e A S m	2700	0	e A Y m	16200	0
e A A n	16200	0	e A C n	2700	0	e A D n	8100	0	e A E n	16200	0	e A L n	8100	0	e A M n	8100	0	e A N n	8100	0	e A S n	2700	0	e A Y n	16200	0
e A A s	5400	0	e A C s	900	0	e A D s	2700	0	e A E s	5400	0	e A L s	2700	0	e A M s	2700	0	e A N s	2700	0	e A S s	900	0	e A Y s	5400	0
e A A y	32400	0	e A C y	5400	0	e A D y	16200	0	e A E y	32400	0	e A L y	16200	0	e A M y	16200	0	e A N y	16200	0	e A S y	5400	0	e A Y y	32400	0
l A A l	4095	0	l A C l	1350	0	l A D l	4050	0	l A E l	8100	0	l A L l	4050	0	l A M l	4050	0	l A N l	4050	0	l A S l	1350	0	l A Y l	8100	0
l A A m	8100	0	l A C m	1350	0	l A D m	4050	0	l A E m	8100	0	l A L m	4050	0	l A M m	4050	0	l A N m	4050	0	l A S m	1350	0	l A Y m	8100	0
l A A n	8100	0	l A C n	1350	0	l A D n	4050	0	l A E n	8100	0	l A L n	4050	0	l A M n	4050	0	l A N n	4050	0	l A S n	1350	0	l A Y n	8100	0
l A A s	2700	0	l A C s	450	0	l A D s	1350	0	l A E s	2700	0	l A L s	1350	0	l A M s	1350	0	l A N s	1350	0	l A S s	450	0	l A Y s	2700	0
l A A y	16200	0	l A C y	2700	0	l A D y	8100	0	l A E y	16200	0	l A L y	8100	0	l A M y	8100	0	l A N y	8100	0	l A S y	2700	0	l A Y y	16200	0
m A A m	4095	45	m A C m	1350	0	m A D m	4050	0	m A E m	8100	0	m A L m	4050	0	m A M m	4050	0	m A N m	4050	0	m A S m	1350	0	m A Y m	8100	0
m A A n	8100	0	m A C n	1350	0	m A D n	4050	0	m A E n	8100	0	m A L n	4050	0	m A M n	4050	0	m A N n	4050	0	m A S n	1350	0	m A Y n	8100	0
m A A s	2700	0	m A C s	450	0	m A D s	1350	0	m A E s	2700	0	m A L s	1350	0	m A M s	1350	0	m A N s	1350	0	m A S s	450	0	m A Y s	2700	0
m A A y	16200	0	m A C y	2700	0	m A D y	8100	0	m A E y	16200	0	m A L y	8100	0	m A M y	8100	0	m A N y	8100	0	m A S y	2700	0	m A Y y	16200	0
n A A n	4095	45	n A C n	1350	0	n A D n	4050	0	n A E n	8100	0	n A L n	4050	0	n A M n	4050	0	n A N n	4050	0	n A S n	1350	0	n A Y n	8100	0
n A A s	2700	0	n A C s	450	0	n A D s	1350	0	n A E s	2700	0	n A L s	1350	0	n A M s	1350	0	n A N s	1350	0	n A S s	450	0	n A Y s	2700	0
n A A y	16200	0	n A C y	2700	0	n A D y	8100	0	n A E y	16200	0	n A L y	8100	0	n A M y	8100	0	n A N y	8100	0	n A S y	2700	0	n A Y y	16200	0
s A A s	465	15	s A C s	150	0	s A D s	450	0	s A E s	900	0	s A L s	450	0	s A M s	450	0	s A N s	450	0	s A S s	150	0	s A Y s	900	0
s A A y	5400	0	s A C y	900	0	s A D y	2700	0	s A E y	5400	0	s A L y	2700	0	s A M y	2700	0	s A N y	2700	0	s A S y	900	0	s A Y y	5400	0
y A A y	16290	60	y A C y	5400	0	y A D y	16200	0	y A E y	32400	0	y A L y	16200	0	y A M y	16200	0	y A N y	16200	0	y A S y	5400	0	y A Y y	32400	0

Table IV: All Linear Inositol Tetramers, their Stereoisomer Numbers and Achiral meso-forms

Tetr	Iso	Ac	Tetr	Iso	Ac	Tetr	Iso	Ac	Tetr	Iso	Ac	Tetr	Iso	Ac	Tetr	Iso	Ac	Tetr	Iso	Ac	Tetr	Iso	Ac	Tetr	Iso	Ac
CA			CC			CD			CE			CL			CM			CN			CS			CY		
			a C C a	465	9	a C D a	2700	0	a C E a	5400	0	a C L a	2700	0	a C M a	2700	0	a C N a	2700	0	a C S a	900	0	a C Y a	5400	0
a C A c	900	0	a C C c	150	0	a C D c	450	0	a C E c	900	0	a C L c	450	0	a C M c	450	0	a C N c	450	0	a C S c	150	0	a C Y c	900	0
a C A d	2700	0	a C C d	450	0	a C D d	1350	0	a C E d	2700	0	a C L d	1350	0	a C M d	1350	0	a C N d	1350	0	a C S d	450	0	a C Y d	2700	0
a C A e	5400	0	a C C e	900	0	a C D e	2700	0	a C E e	5400	0	a C L e	2700	0	a C M e	2700	0	a C N e	2700	0	a C S e	900	0	a C Y e	5400	0
a C A l	2700	0	a C C l	450	0	a C D l	1350	0	a C E l	2700	0	a C L l	1350	0	a C M l	1350	0	a C N l	1350	0	a C S l	450	0	a C Y l	2700	0
a C A m	2700	0	a C C m	450	0	a C D m	1350	0	a C E m	2700	0	a C L m	1350	0	a C M m	1350	0	a C N m	1350	0	a C S m	450	0	a C Y m	2700	0
a C A n	2700	0	a C C n	450	0	a C D n	1350	0	a C E n	2700	0	a C L n	1350	0	a C M n	1350	0	a C N n	1350	0	a C S n	450	0	a C Y n	2700	0
a C A s	900	0	a C C s	150	0	a C D s	450	0	a C E s	900	0	a C L s	450	0	a C M s	450	0	a C N s	450	0	a C S s	150	0	a C Y s	900	0
a C A y	5400	0	a C C y	900	0	a C D y	2700	0	a C E y	5400	0	a C L y	2700	0	a C M y	2700	0	a C N y	2700	0	a C S y	900	0	a C Y y	5400	0
			c C C c	15	3	c C D c	75	0	c C E c	150	2	c C L c	75	0	c C M c	75	1	c C N c	75	1	c C S c	25	1	c C Y c	150	2
c C A d	450	0	c C C d	75	0	c C D d	225	0	c C E d	450	0	c C L d	225	0	c C M d	225	0	c C N d	225	0	c C S d	75	0	c C Y d	450	0
c C A e	900	0	c C C e	150	2	c C D e	450	0	c C E e	900	4	c C L e	450	0	c C M e	450	2	c C N e	450	2	c C S e	150	2	c C Y e	900	4
c C A l		0	c C C l	75	0	c C D l	225	0	c C E l	450	0	c C L l	225	0	c C M l	225	0	c C N l	225	0	c C S l	75	0	c C Y l	450	0
c C A m	450	0	c C C m	75	1	c C D m	225	0	c C E m	450	2	c C L m	225	0	c C M m	225	1	c C N m	225	1	c C S m	75	1	c C Y m	450	2
c C A n	450	0	c C C n	75	1	c C D n	225	0	c C E n	450	2	c C L n	225	0	c C M n	225	1	c C N n	225	1	c C S n	75	1	c C Y n	450	2
c C A s	150	0	c C C s	25	1	c C D s	75	0	c C E s	150	2	c C L s	75	0	c C M s	75	1	c C N s	75	1	c C S s	25	1	c C Y s	150	2
c C A y	900	0	c C C y	150	2	c C D y	450	0	c C E y	900	4	c C L y	450	0	c C M y	450	2	c C N y	450	2	c C S y	150	2	c C Y y	900	4
			d C C d	120	0	d C D d	675	0	d C E d	1350	0	d C L d	675	0	d C M d	675	0	d C N d	675	0	d C S d	225	0	d C Y d	1350	0
d C A e	2700	0	d C C e	450	0	d C D e	1350	0	d C E e	2700	0	d C L e	1350	0	d C M e	1350	0	d C N e	1350	0	d C S e	450	0	d C Y e	2700	0
d C A l	1350	0	d C C l	225	9	d C D l	675	0	d C E l	1350	0	d C L l	675	0	d C M l	675	0	d C N l	675	0	d C S l	225	0	d C Y l	1350	0
d C A m	1350	0	d C C m	225	0	d C D m	675	0	d C E m	1350	0	d C L m	675	0	d C M m	675	0	d C N m	675	0	d C S m	225	0	d C Y m	1350	0
d C A n	1350	0	d C C n	225	0	d C D n	675	0	d C E n	1350	0	d C L n	675	0	d C M n	675	0	d C N n	675	0	d C S n	225	0	d C Y n	1350	0
d C A s	450	0	d C C s	75	0	d C D s	225	0	d C E s	450	0	d C L s	225	0	d C M s	225	0	d C N s	225	0	d C S s	75	0	d C Y s	450	0
d C A y	2700	0	d C C y	450	0	d C D y	1350	0	d C E y	2700	0	d C L y	1350	0	d C M y	1350	0	d C N y	1350	0	d C S y	450	0	d C Y y	2700	0
			e C C e	465	12	e C D e	2700	0	e C E e	5400	8	e C L e	2700	0	e C M e	2700	4	e C N e	2700	4	e C S e	900	4	e C Y e	5400	8
e C A l	2700	0	e C C l	450	0	e C D l	1350	0	e C E l	2700	0	e C L l	1350	0	e C M l	1350	0	e C N l	1350	0	e C S l	450	0	e C Y l	2700	0
e C A m	2700	0	e C C m	450	2	e C D m	1350	0	e C E m	2700	4	e C L m	1350	0	e C M m	1350	2	e C N m	1350	2	e C S m	450	2	e C Y m	2700	4
e C A n	2700	0	e C C n	450	2	e C D n	1350	0	e C E n	2700	4	e C L n	1350	0	e C M n	1350	2	e C N n	1350	2	e C S n	450	2	e C Y n	2700	4
e C A s	900	0	e C C s	150	2	e C D s	450	0	e C E s	900	4	e C L s	450	0	e C M s	450	2	e C N s	450	2	e C S s	150	2	e C Y s	900	4
e C A y	5400	0	e C C y	900	4	e C D y	2700	0	e C E y	5400	8	e C L y	2700	0	e C M y	2700	4	e C N y	2700	4	e C S y	900	4	e C Y y	5400	8
			l C C l	120	0	l C D l	675	0	l C E l	1350	0	l C L l	675	0	l C M l	675	0	l C N l	675	0	l C S l	225	0	l C Y l	1350	0
l C A m	1350	0	l C C m	225	0	l C D m	675	0	l C E m	1350	0	l C L m	675	0	l C M m	675	0	l C N m	675	0	l C S m	225	0	l C Y m	1350	0
l C A n	1350	0	l C C n	225	0	l C D n	675	0	l C E n	1350	0	l C L n	675	0	l C M n	675	0	l C N n	675	0	l C S n	225	0	l C Y n	1350	0
l C A s	450	0	l C C s	75	0	l C D s	225	0	l C E s	450	0	l C L s	225	0	l C M s	225	0	l C N s	225	0	l C S s	75	0	l C Y s	450	0
l C A y	2700	0	l C C y	450	0	l C D y	1350	0	l C E y	2700	0	l C L y	1350	0	l C M y	1350	0	l C N y	1350	0	l C S y	450	0	l C Y y	2700	0
			m C C m	120	8	m C D m	675	0	m C E m	1350	2	m C L m	675	0	m C M m	675	1	m C N m	675	1	m C S m	225	1	m C Y m	1350	2
m C A n	1350	0	m C C n	225	1	m C D n	675	0	m C E n	1350	2	m C L n	675	0	m C M n	675	1	m C N n	675	1	m C S n	225	1	m C Y n	1350	2
m C A s	450	0	m C C s	75	1	m C D s	225	0	m C E s	450	2	m C L s	225	0	m C M s	225	1	m C N s	225	1	m C S s	75	1	m C Y s	450	2
m C A y	2700	0	m C C y	450	2	m C D y	1350	0	m C E y	2700	4	m C L y	1350	0	m C M y	1350	2	m C N y	1350	2	m C S y	450	2	m C Y y	2700	4
			n C C n	120	8	n C D n	675	0	n C E n	1350	2	n C L n	675	0	n C M n	675	1	n C N n	675	1	n C S n	225	1	n C Y n	1350	2
n C A s	450	0	n C C s	75	1	n C D s	225	0	n C E s	450	2	n C L s	225	0	n C M s	225	1	n C N s	225	1	n C S s	75	1	n C Y s	450	2
n C A y	2700	0	n C C y	450	2	n C D y	1350	0	n C E y	2700	4	n C L y	1350	0	n C M y	1350	2	n C N y	1350	2	n C S y	450	2	n C Y y	2700	4
			s C C s	15	3	s C D s	75	0	s C E s	150	2	s C L s	75	0	s C M s	75	1	s C N s	75	1	s C S s	25	1	s C Y s	150	2
s C A y	900	0	s C C y	150	2	s C D y	450	0	s C E y	900	4	s C L y	450	0	s C M y	450	2	s C N y	450	2	s C S y	150	2	s C Y y	900	4
			y C C y	465	12	y C D y	2700	0	y C E y	5400	8	y C L y	2700	0	y C M y	2700	4	y C N y	2700	4	y C S y	900	4	y C Y y	5400	8

Table IV: All Linear Inositol Tetramers, their Stereoisomer Numbers and Achiral meso-forms

Tetr	Iso	Ac	Tetr	Iso	Ac	Tetr	Iso	Ac	Tetr	Iso	Ac	Tetr	Iso	Ac	Tetr	Iso	Ac	Tetr	Iso	Ac	Tetr	Iso	Ac	Tetr	Iso	Ac	Tetr	Iso	Ac
DA			**DC**			**DD**			**DE**			**DL**			**DM**			**DN**			**DS**			**DY**		
						aDDa	4095	0	aDEa	16200	0	aDLa	8100	45	aDMa	8100	0	aDNa	8100	0	aDSa	2700	0	aDYa	16200	0
aDAc	2700	0	aDCc	450	0	aDDc	1350	0	aDEc	2700	0	aDLc	1350	0	aDMc	1350	0	aDNc	1350	0	aDSc	450	0	aDYc	2700	0
aDAd	8100	0	aDCd	1350	0	aDDd	4050	0	aDEd	8100	0	aDLd	4050	0	aDMd	4050	0	aDNd	4050	0	aDSd	1350	0	aDYd	8100	0
aDAe	16200	0	aDCe	2700	0	aDDe	8100	0	aDEe	16200	0	aDLe	8100	0	aDMe	8100	0	aDNe	8100	0	aDSe	2700	0	aDYe	16200	0
aDAl	8100	0	aDCl	1350	0	aDDl	4050	0	aDEl	8100	0	aDLl	4050	0	aDMl	4050	0	aDNl	4050	0	aDSl	1350	0	aDYl	8100	0
aDAm	8100	0	aDCm	1350	0	aDDm	4050	0	aDEm	8100	0	aDLm	4050	0	aDMm	4050	0	aDNm	4050	0	aDSm	1350	0	aDYm	8100	0
aDAn	8100	0	aDCn	1350	0	aDDn	4050	0	aDEn	8100	0	aDLn	4050	0	aDMn	4050	0	aDNn	4050	0	aDSn	1350	0	aDYn	8100	0
aDAs	2700	0	aDCs	450	0	aDDs	1350	0	aDEs	2700	0	aDLs	1350	0	aDMs	1350	0	aDNs	1350	0	aDSs	450	0	aDYs	2700	0
aDAy	16200	0	aDCy	2700	0	aDDy	8100	0	aDEy	16200	0	aDLy	8100	0	aDMy	8100	0	aDNy	8100	0	aDSy	2700	0	aDYy	16200	0
						cDDc	120	0	cDEc	450	0	cDLc	225	15	cDMc	225	0	cDNc	225	0	cDSc	75	0	cDYc	450	0
cDAd	1350	0	cDCd	225	0	cDDd	675	0	cDEd	1350	0	cDLd	675	0	cDMd	675	0	cDNd	675	0	cDSd	225	0	cDYd	1350	0
cDAe	2700	0	cDCe	450	0	cDDe	1350	0	cDEe	2700	0	cDLe	1350	0	cDMe	1350	0	cDNe	1350	0	cDSe	450	0	cDYe	2700	0
cDAl	1350	0	cDCl	225	0	cDDl	675	0	cDEl	1350	0	cDLl	675	0	cDMl	675	0	cDNl	675	0	cDSl	225	0	cDYl	1350	0
cDAm	1350	0	cDCm	225	0	cDDm	675	0	cDEm	1350	0	cDLm	675	0	cDMm	675	0	cDNm	675	0	cDSm	225	0	cDYm	1350	0
cDAn	1350	0	cDCn	225	0	cDDn	675	0	cDEn	1350	0	cDLn	675	0	cDMn	675	0	cDNn	675	0	cDSn	225	0	cDYn	1350	0
cDAs	450	0	cDCs	75	0	cDDs	225	0	cDEs	450	0	cDLs	225	0	cDMs	225	0	cDNs	225	0	cDSs	75	0	cDYs	450	0
cDAy	2700	0	cDCy	450	0	cDDy	1350	0	cDEy	2700	0	cDLy	1350	0	cDMy	1350	0	cDNy	1350	0	cDSy	450	0	cDYy	2700	0
						dDDd	1035	0	dDEd	4050	0	dDLd	2025	0	dDMd	2025	0	dDNd	2025	0	dDSd	675	0	dDYd	4050	0
dDAe	8100	0	dDCe	1350	0	dDDe	4050	0	dDEe	8100	0	dDLe	4050	0	dDMe	4050	0	dDNe	4050	0	dDSe	1350	0	dDYe	8100	0
dDAl	4050	0	dDCl	675	0	dDDl	2025	0	dDEl	4050	0	dDLl	2025	45	dDMl	2025	0	dDNl	2025	0	dDSl	675	0	dDYl	4050	0
dDAm	4050	0	dDCm	675	0	dDDm	2025	0	dDEm	4050	0	dDLm	2025	0	dDMm	2025	0	dDNm	2025	0	dDSm	675	0	dDYm	4050	0
dDAn	4050	0	dDCn	675	0	dDDn	2025	0	dDEn	4050	0	dDLn	2025	0	dDMn	2025	0	dDNn	2025	0	dDSn	675	0	dDYn	4050	0
dDAs	1350	0	dDCs	225	0	dDDs	675	0	dDEs	1350	0	dDLs	675	0	dDMs	675	0	dDNs	675	0	dDSs	225	0	dDYs	1350	0
dDAy	8100	0	dDCy	1350	0	dDDy	4050	0	dDEy	8100	0	dDLy	4050	0	dDMy	4050	0	dDNy	4050	0	dDSy	1350	0	dDYy	8100	0
						eDDe	4095	0	eDEe	16200	0	eDLe	8100	60	eDMe	8100	0	eDNe	8100	0	eDSe	2700	0	eDYe	16200	0
eDAl	8100	0	eDCl	1350	0	eDDl	4050	0	eDEl	8100	0	eDLl	4050	0	eDMl	4050	0	eDNl	4050	0	eDSl	1350	0	eDYl	8100	0
eDAm	8100	0	eDCm	1350	0	eDDm	4050	0	eDEm	8100	0	eDLm	4050	0	eDMm	4050	0	eDNm	4050	0	eDSm	1350	0	eDYm	8100	0
eDAn	8100	0	eDCn	1350	0	eDDn	4050	0	eDEn	8100	0	eDLn	4050	0	eDMn	4050	0	eDNn	4050	0	eDSn	1350	0	eDYn	8100	0
eDAs	2700	0	eDCs	450	0	eDDs	1350	0	eDEs	2700	0	eDLs	1350	0	eDMs	1350	0	eDNs	1350	0	eDSs	450	0	eDYs	2700	0
eDAy	16200	0	eDCy	2700	0	eDDy	8100	0	eDEy	16200	0	eDLy	8100	0	eDMy	8100	0	eDNy	8100	0	eDSy	2700	0	eDYy	16200	0
						lDDl	1035	0	lDEl	4050	0	lDLl	2025	0	lDMl	2025	0	lDNl	2025	0	lDSl	675	0	lDYl	4050	0
lDAm	4050	0	lDCm	675	0	lDDm	2025	0	lDEm	4050	0	lDLm	2025	0	lDMm	2025	0	lDNm	2025	0	lDSm	675	0	lDYm	4050	0
lDAn	4050	0	lDCn	675	0	lDDn	2025	0	lDEn	4050	0	lDLn	2025	0	lDMn	2025	0	lDNn	2025	0	lDSn	675	0	lDYn	4050	0
lDAs	1350	0	lDCs	225	0	lDDs	675	0	lDEs	1350	0	lDLs	675	0	lDMs	675	0	lDNs	675	0	lDSs	225	0	lDYs	1350	0
lDAy	8100	0	lDCy	1350	0	lDDy	4050	0	lDEy	8100	0	lDLy	4050	0	lDMy	4050	0	lDNy	4050	0	lDSy	1350	0	lDYy	8100	0
						mDDm	1035	0	mDEm	4050	0	mDLm	2025	45	mDMm	2025	0	mDNm	2025	0	mDSm	675	0	mDYm	4050	0
mDAn	4050	0	mDCn	675	0	mDDn	2025	0	mDEn	4050	0	mDLn	2025	0	mDMn	2025	0	mDNn	2025	0	mDSn	675	0	mDYn	4050	0
mDAs	1350	0	mDCs	225	0	mDDs	675	0	mDEs	1350	0	mDLs	675	0	mDMs	675	0	mDNs	675	0	mDSs	225	0	mDYs	1350	0
mDAy	8100	0	mDCy	1350	0	mDDy	4050	0	mDEy	8100	0	mDLy	4050	0	mDMy	4050	0	mDNy	4050	0	mDSy	1350	0	mDYy	8100	0
						nDDn	1035	0	nDEn	4050	0	nDLn	2025	45	nDMn	2025	0	nDNn	2025	0	nDSn	675	0	nDYn	4050	0
nDAs	1350	0	nDCs	225	0	nDDs	675	0	nDEs	1350	0	nDLs	675	0	nDMs	675	0	nDNs	675	0	nDSs	225	0	nDYs	1350	0
nDAy	8100	0	nDCy	1350	0	nDDy	4050	0	nDEy	8100	0	nDLy	4050	0	nDMy	4050	0	nDNy	4050	0	nDSy	1350	0	nDYy	8100	0
						sDDs	120	0	sDEs	450	0	sDLs	225	15	sDMs	225	0	sDNs	225	0	sDSs	75	0	sDYs	450	0
sDAy	2700	0	sDCy	450	0	sDDy	1350	0	sDEy	2700	0	sDLy	1350	0	sDMy	1350	0	sDNy	1350	0	sDSy	450	0	sDYy	2700	0
						yDDy	4095	0	yDEy	16200	0	yDLy	8100	60	yDMy	8100	0	yDNy	8100	0	yDSy	2700	0	yDYy	16200	0

Table IV: All Linear Inositol Tetramers, their Stereoisomer Numbers and Achiral meso-forms

Tetr	Iso	Ac	Tetr	Iso	Ac	Tetr	Iso	Ac	Tetr	Iso	Ac	Tetr	Iso	Ac	Tetr	Iso	Ac	Tetr	Iso	Ac	Tetr	Iso	Ac	Tetr	Iso	Ac
EA			EC			ED			EE			EL			EM			EN			ES			EY		
									a E E a	16290	19	a E L a	16200	0	a E M a	16200	0	a E N a	16200	0	a E S a	5400	0	a E Y a	32400	0
a E A c	5400	0	a E C c	900	0	a E D c	2700	0	a E E c	5400	0	a E L c	2700	0	a E M c	2700	0	a E N c	2700	0	a E S c	900	0	a E Y c	5400	0
a E A d	16200	0	a E C d	2700	0	a E D d	8100	0	a E E d	16200	0	a E L d	8100	0	a E M d	8100	0	a E N d	8100	0	a E S d	2700	0	a E Y d	16200	0
a E A e	32400	0	a E C e	5400	0	a E D e	16200	0	a E E e	32400	0	a E L e	16200	0	a E M e	16200	0	a E N e	16200	0	a E S e	5400	0	a E Y e	32400	0
a E A l	16200	0	a E C l	2700	0	a E D l	8100	0	a E E l	16200	0	a E L l	8100	0	a E M l	8100	0	a E N l	8100	0	a E S l	2700	0	a E Y l	16200	0
a E A m	16200	0	a E C m	2700	0	a E D m	8100	0	a E E m	16200	0	a E L m	8100	0	a E M m	8100	0	a E N m	8100	0	a E S m	2700	0	a E Y m	16200	0
a E A n	16200	0	a E C n	2700	0	a E D n	8100	0	a E E n	16200	0	a E L n	8100	0	a E M n	8100	0	a E N n	8100	0	a E S n	2700	0	a E Y n	16200	0
a E A s	5400	0	a E C s	900	0	a E D s	2700	0	a E E s	5400	0	a E L s	2700	0	a E M s	2700	0	a E N s	2700	0	a E S s	900	0	a E Y s	5400	0
a E A y	32400	0	a E C y	5400	0	a E D y	16200	0	a E E y	32400	0	a E L y	16200	0	a E M y	16200	0	a E N y	16200	0	a E S y	5400	0	a E Y y	32400	0
									c E E c	465	7	c E L c	450	0	c E M c	450	2	c E N c	450	2	c E S c	150	2	c E Y c	900	4
c E A d	2700	0	c E C d	450	0	c E D d	1350	0	c E E d	2700	0	c E L d	1350	0	c E M d	1350	0	c E N d	1350	0	c E S d	450	0	c E Y d	2700	0
c E A e	5400	0	c E C e	900	4	c E D e	2700	0	c E E e	5400	6	c E L e	2700	0	c E M e	2700	4	c E N e	2700	4	c E S e	900	4	c E Y e	5400	8
c E A l	2700	0	c E C l	450	0	c E D l	1350	0	c E E l	2700	0	c E L l	1350	0	c E M l	1350	0	c E N l	1350	0	c E S l	450	0	c E Y l	2700	0
c E A m	2700	0	c E C m	450	2	c E D m	1350	0	c E E m	2700	3	c E L m	1350	0	c E M m	1350	2	c E N m	1350	2	c E S m	450	2	c E Y m	2700	4
c E A n	2700	0	c E C n	450	2	c E D n	1350	0	c E E n	2700	3	c E L n	1350	0	c E M n	1350	2	c E N n	1350	2	c E S n	450	2	c E Y n	2700	4
c E A s	900	0	c E C s	150	2	c E D s	450	0	c E E s	900	3	c E L s	450	0	c E M s	450	2	c E N s	450	2	c E S s	150	2	c E Y s	900	4
c E A y	5400	0	c E C y	900	4	c E D y	2700	0	c E E y	5400	6	c E L y	2700	0	c E M y	2700	4	c E N y	2700	4	c E S y	900	4	c E Y y	5400	8
									d E E d	4095	0	d E L d	4050	0	d E M d	4050	0	d E N d	4050	0	d E S d	1350	0	d E Y d	8100	0
d E A e	16200	0	d E C e	2700	0	d E D e	8100	0	d E E e	16200	0	d E L e	8100	0	d E M e	8100	0	d E N e	8100	0	d E S e	2700	0	d E Y e	16200	0
d E A l	8100	0	d E C l	1350	0	d E D l	4050	0	d E E l	8100	19	d E L l	4050	0	d E M l	4050	0	d E N l	4050	0	d E S l	1350	0	d E Y l	8100	0
d E A m	8100	0	d E C m	1350	0	d E D m	4050	0	d E E m	8100	0	d E L m	4050	0	d E M m	4050	0	d E N m	4050	0	d E S m	1350	0	d E Y m	8100	0
d E A n	8100	0	d E C n	1350	0	d E D n	4050	0	d E E n	8100	0	d E L n	4050	0	d E M n	4050	0	d E N n	4050	0	d E S n	1350	0	d E Y n	8100	0
d E A s	2700	0	d E C s	450	0	d E D s	1350	0	d E E s	2700	0	d E L s	1350	0	d E M s	1350	0	d E N s	1350	0	d E S s	450	0	d E Y s	2700	0
d E A y	16200	0	d E C y	2700	0	d E D y	8100	0	d E E y	16200	0	d E L y	8100	0	d E M y	8100	0	d E N y	8100	0	d E S y	2700	0	d E Y y	16200	0
									e E E e	16290	25	e E L e	16200	0	e E M e	16200	8	e E N e	16200	8	e E S e	5400	8	e E Y e	32400	16
e E A l	16200	0	e E C l	2700	0	e E D l	8100	0	e E E l	16200	0	e E L l	8100	0	e E M l	8100	0	e E N l	8100	0	e E S l	2700	0	e E Y l	16200	0
e E A m	16200	0	e E C m	2700	4	e E D m	8100	0	e E E m	16200	6	e E L m	8100	0	e E M m	8100	4	e E N m	8100	4	e E S m	2700	4	e E Y m	16200	8
e E A n	16200	0	e E C n	2700	4	e E D n	8100	0	e E E n	16200	6	e E L n	8100	0	e E M n	8100	4	e E N n	8100	4	e E S n	2700	4	e E Y n	16200	8
e E A s	5400	0	e E C s	900	4	e E D s	2700	0	e E E s	5400	6	e E L s	2700	0	e E M s	2700	4	e E N s	2700	4	e E S s	900	4	e E Y s	5400	8
e E A y	32400	0	e E C y	5400	8	e E D y	16200	0	e E E y	32400	12	e E L y	16200	0	e E M y	16200	8	e E N y	16200	8	e E S y	5400	8	e E Y y	32400	16
									l E E l	4095	0	l E L l	4050	0	l E M l	4050	0	l E N l	4050	0	l E S l	1350	0	l E Y l	8100	0
l E A m	8100	0	l E C m	1350	0	l E D m	4050	0	l E E m	8100	0	l E L m	4050	0	l E M m	4050	0	l E N m	4050	0	l E S m	1350	0	l E Y m	8100	0
l E A n	8100	0	l E C n	1350	0	l E D n	4050	0	l E E n	8100	0	l E L n	4050	0	l E M n	4050	0	l E N n	4050	0	l E S n	1350	0	l E Y n	8100	0
l E A s	2700	0	l E C s	450	0	l E D s	1350	0	l E E s	2700	0	l E L s	1350	0	l E M s	1350	0	l E N s	1350	0	l E S s	450	0	l E Y s	2700	0
l E A y	16200	0	l E C y	2700	0	l E D y	8100	0	l E E y	16200	0	l E L y	8100	0	l E M y	8100	0	l E N y	8100	0	l E S y	2700	0	l E Y y	16200	0
									m E E m	4095	17	m E L m	4050	0	m E M m	4050	2	m E N m	4050	2	m E S m	1350	2	m E Y m	8100	4
m E A n	8100	0	m E C n	1350	2	m E D n	4050	0	m E E n	8100	3	m E L n	4050	0	m E M n	4050	2	m E N n	4050	2	m E S n	1350	2	m E Y n	8100	4
m E A s	2700	0	m E C s	450	2	m E D s	1350	0	m E E s	2700	3	m E L s	1350	0	m E M s	1350	2	m E N s	1350	2	m E S s	450	2	m E Y s	2700	4
m E A y	16200	0	m E C y	2700	4	m E D y	8100	0	m E E y	16200	6	m E L y	8100	0	m E M y	8100	4	m E N y	8100	4	m E S y	2700	4	m E Y y	16200	8
									n E E n	4095	17	n E L n	4050	0	n E M n	4050	2	n E N n	4050	2	n E S n	1350	2	n E Y n	8100	4
n E A s	2700	0	n E C s	450	2	n E D s	1350	0	n E E s	2700	3	n E L s	1350	0	n E M s	1350	2	n E N s	1350	2	n E S s	450	2	n E Y s	2700	4
n E A y	16200	0	n E C y	2700	4	n E D y	8100	0	n E E y	16200	6	n E L y	8100	0	n E M y	8100	4	n E N y	8100	4	n E S y	2700	4	n E Y y	16200	8
									s E E s	465	7	s E L s	450	0	s E M s	450	2	s E N s	450	2	s E S s	150	2	s E Y s	900	4
s E A y	5400	0	s E C y	900	4	s E D y	2700	0	s E E y	5400	6	s E L y	2700	0	s E M y	2700	4	s E N y	2700	4	s E S y	900	4	s E Y y	5400	8
									y E E y	16290	25	y E L y	16200	0	y E M y	16200	8	y E N y	16200	8	y E S y	5400	8	y E Y y	32400	16

Table IV: All Linear Inositol Tetramers, their Stereoisomer Numbers and Achiral meso-forms

Tetr	Iso	Ac	Tetr	Iso	Ac	Tetr	Iso	Ac	Tetr	Iso	Ac	Tetr	Iso	Ac	Tetr	Iso	Ac	Tetr	Iso	Ac	Tetr	Iso	Ac	Tetr	Iso	Ac
LA			LC			LD			LE			LL			LM			LN			LS			LY		
												a L L a	4095	0	a L M a	8100	0	a L N a	8100	0	a L S a	2700	0	a L Y a	16200	0
a L A c	2700	0	a L C c	450	0	a L D c	1350	0	a L E c	2700	0	a L L c	1350	0	a L M c	1350	0	a L N c	1350	0	a L S c	450	0	a L Y c	2700	0
a L A d	8100	0	a L C d	1350	0	a L D d	4050	0	a L E d	8100	0	a L L d	4050	0	a L M d	4050	0	a L N d	4050	0	a L S d	1350	0	a L Y d	8100	0
a L A e	16200	0	a L C e	2700	0	a L D e	8100	0	a L E e	16200	0	a L L e	8100	0	a L M e	8100	0	a L N e	8100	0	a L S e	2700	0	a L Y e	16200	0
a L A l	8100	0	a L C l	1350	0	a L D l	4050	0	a L E l	8100	0	a L L l	4050	0	a L M l	4050	0	a L N l	4050	0	a L S l	1350	0	a L Y l	8100	0
a L A m	8100	0	a L C m	1350	0	a L D m	4050	0	a L E m	8100	0	a L L m	4050	0	a L M m	4050	0	a L N m	4050	0	a L S m	1350	0	a L Y m	8100	0
a L A n	8100	0	a L C n	1350	0	a L D n	4050	0	a L E n	8100	0	a L L n	4050	0	a L M n	4050	0	a L N n	4050	0	a L S n	1350	0	a L Y n	8100	0
a L A s	2700	0	a L C s	450	0	a L D s	1350	0	a L E s	2700	0	a L L s	1350	0	a L M s	1350	0	a L N s	1350	0	a L S s	450	0	a L Y s	2700	0
a L A y	16200	0	a L C y	2700	0	a L D y	8100	0	a L E y	16200	0	a L L y	8100	0	a L M y	8100	0	a L N y	8100	0	a L S y	2700	0	a L Y y	16200	0
												c L L c	120	0	c L M c	225	0	c L N c	225	0	c L S c	75	0	c L Y c	450	0
c L A d	1350	0	c L C d	225	0	c L D d	675	0	c L E d	1350	0	c L L d	675	0	c L M d	675	0	c L N d	675	0	c L S d	225	0	c L Y d	1350	0
c L A e	2700	0	c L C e	450	0	c L D e	1350	0	c L E e	2700	0	c L L e	1350	0	c L M e	1350	0	c L N e	1350	0	c L S e	450	0	c L Y e	2700	0
c L A l	1350	0	c L C l	225	0	c L D l	675	0	c L E l	1350	0	c L L l	675	0	c L M l	675	0	c L N l	675	0	c L S l	225	0	c L Y l	1350	0
c L A m	1350	0	c L C m	225	0	c L D m	675	0	c L E m	1350	0	c L L m	675	0	c L M m	675	0	c L N m	675	0	c L S m	225	0	c L Y m	1350	0
c L A n	1350	0	c L C n	225	0	c L D n	675	0	c L E n	1350	0	c L L n	675	0	c L M n	675	0	c L N n	675	0	c L S n	225	0	c L Y n	1350	0
c L A s	450	0	c L C s	75	0	c L D s	225	0	c L E s	450	0	c L L s	225	0	c L M s	225	0	c L N s	225	0	c L S s	75	0	c L Y s	450	0
c L A y	2700	0	c L C y	450	0	c L D y	1350	0	c L E y	2700	0	c L L y	1350	0	c L M y	1350	0	c L N y	1350	0	c L S y	450	0	c L Y y	2700	0
												d L L d	1035	0	d L M d	2025	0	d L N d	2025	0	d L S d	675	0	d L Y d	4050	0
d L A e	8100	0	d L C e	1350	0	d L D e	4050	0	d L E e	8100	0	d L L e	4050	0	d L M e	4050	0	d L N e	4050	0	d L S e	1350	0	d L Y e	8100	0
d L A l	4050	0	d L C l	675	0	d L D l	2025	45	d L E l	4050	0	d L L l	2025	0	d L M l	2025	0	d L N l	2025	0	d L S l	675	0	d L Y l	4050	0
d L A m	4050	0	d L C m	675	0	d L D m	2025	0	d L E m	4050	0	d L L m	2025	0	d L M m	2025	0	d L N m	2025	0	d L S m	675	0	d L Y m	4050	0
d L A n	4050	0	d L C n	675	0	d L D n	2025	0	d L E n	4050	0	d L L n	2025	0	d L M n	2025	0	d L N n	2025	0	d L S n	675	0	d L Y n	4050	0
d L A s	1350	0	d L C s	225	0	d L D s	675	0	d L E s	1350	0	d L L s	675	0	d L M s	675	0	d L N s	675	0	d L S s	225	0	d L Y s	1350	0
d L A y	8100	0	d L C y	1350	0	d L D y	4050	0	d L E y	8100	0	d L L y	4050	0	d L M y	4050	0	d L N y	4050	0	d L S y	1350	0	d L Y y	8100	0
												e L L e	4095	0	e L M e	8100	0	e L N e	8100	0	e L S e	2700	0	e L Y e	16200	0
e L A l	8100	0	e L C l	1350	0	e L D l	4050	0	e L E l	8100	0	e L L l	4050	0	e L M l	4050	0	e L N l	4050	0	e L S l	1350	0	e L Y l	8100	0
e L A m	8100	0	e L C m	1350	0	e L D m	4050	0	e L E m	8100	0	e L L m	4050	0	e L M m	4050	0	e L N m	4050	0	e L S m	1350	0	e L Y m	8100	0
e L A n	8100	0	e L C n	1350	0	e L D n	4050	0	e L E n	8100	0	e L L n	4050	0	e L M n	4050	0	e L N n	4050	0	e L S n	1350	0	e L Y n	8100	0
e L A s	2700	0	e L C s	450	0	e L D s	1350	0	e L E s	2700	0	e L L s	1350	0	e L M s	1350	0	e L N s	1350	0	e L S s	450	0	e L Y s	2700	0
e L A y	16200	0	e L C y	2700	0	e L D y	8100	0	e L E y	16200	0	e L L y	8100	0	e L M y	8100	0	e L N y	8100	0	e L S y	2700	0	e L Y y	16200	0
												l L L l	1035	0	l L M l	2025	0	l L N l	2025	0	l L S l	675	0	l L Y l	4050	0
l L A m	4050	0	l L C m	675	0	l L D m	2025	0	l L E m	4050	0	l L L m	2025	0	l L M m	2025	0	l L N m	2025	0	l L S m	675	0	l L Y m	4050	0
l L A n	4050	0	l L C n	675	0	l L D n	2025	0	l L E n	4050	0	l L L n	2025	0	l L M n	2025	0	l L N n	2025	0	l L S n	675	0	l L Y n	4050	0
l L A s	1350	0	l L C s	225	0	l L D s	675	0	l L E s	1350	0	l L L s	675	0	l L M s	675	0	l L N s	675	0	l L S s	225	0	l L Y s	1350	0
l L A y	8100	0	l L C y	1350	0	l L D y	4050	0	l L E y	8100	0	l L L y	4050	0	l L M y	4050	0	l L N y	4050	0	l L S y	1350	0	l L Y y	8100	0
												m L L m	1035	0	m L M m	2025	0	m L N m	2025	0	m L S m	675	0	m L Y m	4050	0
m L A n	4050	0	m L C n	675	0	m L D n	2025	0	m L E n	4050	0	m L L n	2025	0	m L M n	2025	0	m L N n	2025	0	m L S n	675	0	m L Y n	4050	0
m L A s	1350	0	m L C s	225	0	m L D s	675	0	m L E s	1350	0	m L L s	675	0	m L M s	675	0	m L N s	675	0	m L S s	225	0	m L Y s	1350	0
m L A y	8100	0	m L C y	1350	0	m L D y	4050	0	m L E y	8100	0	m L L y	4050	0	m L M y	4050	0	m L N y	4050	0	m L S y	1350	0	m L Y y	8100	0
												n L L n	1035	0	n L M n	2025	0	n L N n	2025	0	n L S n	675	0	n L Y n	4050	0
n L A s	1350	0	n L C s	225	0	n L D s	675	0	n L E s	1350	0	n L L s	675	0	n L M s	675	0	n L N s	675	0	n L S s	225	0	n L Y s	1350	0
n L A y	8100	0	n L C y	1350	0	n L D y	4050	0	n L E y	8100	0	n L L y	4050	0	n L M y	4050	0	n L N y	4050	0	n L S y	1350	0	n L Y y	8100	0
												s L L s	120	0	s L M s	225	0	s L N s	225	0	s L S s	75	0	s L Y s	450	0
s L A y	2700	0	s L C y	450	0	s L D y	1350	0	s L E y	2700	0	s L L y	1350	0	s L M y	1350	0	s L N y	1350	0	s L S y	450	0	s L Y y	2700	0
												y L L y	4095	0	y L M y	8100	0	y L N y	8100	0	y L S y	2700	0	y L Y y	16200	0

Table IV: All Linear Inositol Tetramers, their Stereoisomer Numbers and Achiral meso-forms

Tetr	Iso	Ac	Tetr	Iso	Ac	Tetr	Iso	Ac	Tetr	Iso	Ac	Tetr	Iso	Ac	Tetr	Iso	Ac	Tetr	Iso	Ac	Tetr	Iso	Ac	Tetr	Iso	Ac
MA			**MC**			**MD**			**ME**			**ML**			**MM**			**MN**			**MS**			**MY**		
															a **MM** a	4095	24	a **MN** a	8100	0	a **MS** a	2700	0	a **MY** a	16200	0
a **MA** c	2700	0	a **MC** c	450	0	a **MD** c	1350	0	a **ME** c	2700	0	a **ML** c	1350	0	a **MM** c	1350	0	a **MN** c	1350	0	a **MS** c	450	0	a **MY** c	2700	0
a **MA** d	8100	0	a **MC** d	1350	0	a **MD** d	4050	0	a **ME** d	8100	0	a **ML** d	4050	0	a **MM** d	4050	0	a **MN** d	4050	0	a **MS** d	1350	0	a **MY** d	8100	0
a **MA** e	16200	0	a **MC** e	2700	0	a **MD** e	8100	0	a **ME** e	16200	0	a **ML** e	8100	0	a **MM** e	8100	0	a **MN** e	8100	0	a **MS** e	2700	0	a **MY** e	16200	0
a **MA** l	8100	0	a **MC** l	1350	0	a **MD** l	4050	0	a **ME** l	8100	0	a **ML** l	4050	0	a **MM** l	4050	0	a **MN** l	4050	0	a **MS** l	1350	0	a **MY** l	8100	0
a **MA** m	8100	0	a **MC** m	1350	0	a **MD** m	4050	0	a **ME** m	8100	0	a **ML** m	4050	0	a **MM** m	4050	0	a **MN** m	4050	0	a **MS** m	1350	0	a **MY** m	8100	0
a **MA** n	8100	0	a **MC** n	1350	0	a **MD** n	4050	0	a **ME** n	8100	0	a **ML** n	4050	0	a **MM** n	4050	0	a **MN** n	4050	0	a **MS** n	1350	0	a **MY** n	8100	0
a **MA** s	2700	0	a **MC** s	450	0	a **MD** s	1350	0	a **ME** s	2700	0	a **ML** s	1350	0	a **MM** s	1350	0	a **MN** s	1350	0	a **MS** s	450	0	a **MY** s	2700	0
a **MA** y	16200	0	a **MC** y	2700	0	a **MD** y	8100	0	a **ME** y	16200	0	a **ML** y	8100	0	a **MM** y	8100	0	a **MN** y	8100	0	a **MS** y	2700	0	a **MY** y	16200	0
															c **MM** c	120	8	c **MN** c	225	1	c **MS** c	75	1	c **MY** c	450	2
c **MA** d	1350	0	c **MC** d	225	0	c **MD** d	675	0	c **ME** d	1350	0	c **ML** d	675	0	c **MM** d	675	0	c **MN** d	675	0	c **MS** d	225	0	c **MY** d	1350	0
c **MA** e	2700	0	c **MC** e	450	2	c **MD** e	1350	0	c **ME** e	2700	4	c **ML** e	1350	0	c **MM** e	1350	2	c **MN** e	1350	2	c **MS** e	450	2	c **MY** e	2700	4
c **MA** l	1350	0	c **MC** l	225	0	c **MD** l	675	0	c **ME** l	1350	0	c **ML** l	675	0	c **MM** l	675	0	c **MN** l	675	0	c **MS** l	225	0	c **MY** l	1350	0
c **MA** m	1350	0	c **MC** m	225	1	c **MD** m	675	0	c **ME** m	1350	2	c **ML** m	675	0	c **MM** m	675	1	c **MN** m	675	1	c **MS** m	225	1	c **MY** m	1350	2
c **MA** n	1350	0	c **MC** n	225	1	c **MD** n	675	0	c **ME** n	1350	2	c **ML** n	675	0	c **MM** n	675	1	c **MN** n	675	1	c **MS** n	225	1	c **MY** n	1350	2
c **MA** s	450	0	c **MC** s	75	1	c **MD** s	225	0	c **ME** s	450	2	c **ML** s	225	0	c **MM** s	225	1	c **MN** s	225	1	c **MS** s	75	1	c **MY** s	450	2
c **MA** y	2700	0	c **MC** y	450	2	c **MD** y	1350	0	c **ME** y	2700	4	c **ML** y	1350	0	c **MM** y	1350	2	c **MN** y	1350	2	c **MS** y	450	2	c **MY** y	2700	4
															d **MM** d	1035	0	d **MN** d	2025	0	d **MS** d	675	0	d **MY** d	4050	0
d **MA** e	8100	0	d **MC** e	1350	0	d **MD** e	4050	0	d **ME** e	8100	0	d **ML** e	4050	0	d **MM** e	4050	0	d **MN** e	4050	0	d **MS** e	1350	0	d **MY** e	8100	0
d **MA** l	4050	0	d **MC** l	675	0	d **MD** l	2025	0	d **ME** l	4050	0	d **ML** l	2025	0	d **MM** l	2025	24	d **MN** l	2025	0	d **MS** l	675	0	d **MY** l	4050	0
d **MA** m	4050	0	d **MC** m	675	0	d **MD** m	2025	0	d **ME** m	4050	0	d **ML** m	2025	0	d **MM** m	2025	0	d **MN** m	2025	0	d **MS** m	675	0	d **MY** m	4050	0
d **MA** n	4050	0	d **MC** n	675	0	d **MD** n	2025	0	d **ME** n	4050	0	d **ML** n	2025	0	d **MM** n	2025	0	d **MN** n	2025	0	d **MS** n	675	0	d **MY** n	4050	0
d **MA** s	1350	0	d **MC** s	225	0	d **MD** s	675	0	d **ME** s	1350	0	d **ML** s	675	0	d **MM** s	675	0	d **MN** s	675	0	d **MS** s	225	0	d **MY** s	1350	0
d **MA** y	8100	0	d **MC** y	1350	0	d **MD** y	4050	0	d **ME** y	8100	0	d **ML** y	4050	0	d **MM** y	4050	0	d **MN** y	4050	0	d **MS** y	1350	0	d **MY** y	8100	0
															e **MM** e	4095	32	e **MN** e	8100	4	e **MS** e	2700	4	e **MY** e	16200	8
e **MA** l	8100	0	e **MC** l	1350	0	e **MD** l	4050	0	e **ME** l	8100	0	e **ML** l	4050	0	e **MM** l	4050	0	e **MN** l	4050	0	e **MS** l	1350	0	e **MY** l	8100	0
e **MA** m	8100	0	e **MC** m	1350	2	e **MD** m	4050	0	e **ME** m	8100	4	e **ML** m	4050	0	e **MM** m	4050	2	e **MN** m	4050	2	e **MS** m	1350	2	e **MY** m	8100	4
e **MA** n	8100	0	e **MC** n	1350	2	e **MD** n	4050	0	e **ME** n	8100	4	e **ML** n	4050	0	e **MM** n	4050	2	e **MN** n	4050	2	e **MS** n	1350	2	e **MY** n	8100	4
e **MA** s	2700	0	e **MC** s	450	2	e **MD** s	1350	0	e **ME** s	2700	4	e **ML** s	1350	0	e **MM** s	1350	2	e **MN** s	1350	2	e **MS** s	450	2	e **MY** s	2700	4
e **MA** y	16200	0	e **MC** y	2700	4	e **MD** y	8100	0	e **ME** y	16200	8	e **ML** y	8100	0	e **MM** y	8100	4	e **MN** y	8100	4	e **MS** y	2700	4	e **MY** y	16200	8
															l **MM** l	1035	0	l **MN** l	2025	0	l **MS** l	675	0	l **MY** l	4050	0
l **MA** m	4050	0	l **MC** m	675	0	l **MD** m	2025	0	l **ME** m	4050	0	l **ML** m	2025	0	l **MM** m	2025	0	l **MN** m	2025	0	l **MS** m	675	0	l **MY** m	4050	0
l **MA** n	4050	0	l **MC** n	675	0	l **MD** n	2025	0	l **ME** n	4050	0	l **ML** n	2025	0	l **MM** n	2025	0	l **MN** n	2025	0	l **MS** n	675	0	l **MY** n	4050	0
l **MA** s	1350	0	l **MC** s	225	0	l **MD** s	675	0	l **ME** s	1350	0	l **ML** s	675	0	l **MM** s	675	0	l **MN** s	675	0	l **MS** s	225	0	l **MY** s	1350	0
l **MA** y	8100	0	l **MC** y	1350	0	l **MD** y	4050	0	l **ME** y	8100	0	l **ML** y	4050	0	l **MM** y	4050	0	l **MN** y	4050	0	l **MS** y	1350	0	l **MY** y	8100	0
															m **MM** m	1035	23	m **MN** m	2025	1	m **MS** m	675	1	m **MY** m	4050	2
m **MA** n	4050	0	m **MC** n	675	1	m **MD** n	2025	0	m **ME** n	4050	2	m **ML** n	2025	0	m **MM** n	2025	1	m **MN** n	2025	1	m **MS** n	675	1	m **MY** n	4050	2
m **MA** s	1350	0	m **MC** s	225	1	m **MD** s	675	0	m **ME** s	1350	2	m **ML** s	675	0	m **MM** s	675	1	m **MN** s	675	1	m **MS** s	225	1	m **MY** s	1350	2
m **MA** y	8100	0	m **MC** y	1350	2	m **MD** y	4050	0	m **ME** y	8100	4	m **ML** y	4050	0	m **MM** y	4050	2	m **MN** y	4050	2	m **MS** y	1350	2	m **MY** y	8100	4
															n **MM** n	1035	23	n **MN** n	2025	1	n **MS** n	675	1	n **MY** n	4050	2
n **MA** s	1350	0	n **MC** s	225	1	n **MD** s	675	0	n **ME** s	1350	2	n **ML** s	675	0	n **MM** s	675	1	n **MN** s	675	1	n **MS** s	225	1	n **MY** s	1350	2
n **MA** y	8100	0	n **MC** y	1350	2	n **MD** y	4050	0	n **ME** y	8100	4	n **ML** y	4050	0	n **MM** y	4050	2	n **MN** y	4050	2	n **MS** y	1350	2	n **MY** y	8100	4
															s **MM** s	120	8	s **MN** s	225	1	s **MS** s	75	1	s **MY** s	450	2
s **MA** y	2700	0	s **MC** y	450	2	s **MD** y	1350	0	s **ME** y	2700	4	s **ML** y	1350	0	s **MM** y	1350	2	s **MN** y	1350	2	s **MS** y	450	2	s **MY** y	2700	4
															y **MM** y	4095	32	y **MN** y	8100	4	y **MS** y	2700	4	y **MY** y	16200	8

Table IV: All Linear Inositol Tetramers, their Stereoisomer Numbers and Achiral meso-forms

Tetr	Iso	Ac	Tetr	Iso	Ac	Tetr	Iso	Ac	Tetr	Iso	Ac	Tetr	Iso	Ac	Tetr	Iso	Ac	Tetr	Iso	Ac	Tetr	Iso	Ac	Tetr	Iso	Ac
NA			**NC**			**ND**			**NE**			**NL**			**NM**			**NN**			**NS**			**NY**		
																		a N N a	4095	24	a N S a	2700	0	a N Y a	16200	0
a N A c	2700	0	a N C c	450	0	a N D c	1350	0	a N E c	2700	0	a N L c	1350	0	a N M c	1350	0	a N N c	1350	0	a N S c	450	0	a N Y c	2700	0
a N A d	8100	0	a N C d	1350	0	a N D d	4050	0	a N E d	8100	0	a N L d	4050	0	a N M d	4050	0	a N N d	4050	0	a N S d	1350	0	a N Y d	8100	0
a N A e	16200	0	a N C e	2700	0	a N D e	8100	0	a N E e	16200	0	a N L e	8100	0	a N M e	8100	0	a N N e	8100	0	a N S e	2700	0	a N Y e	16200	0
a N A l	8100	0	a N C l	1350	0	a N D l	4050	0	a N E l	8100	0	a N L l	4050	0	a N M l	4050	0	a N N l	4050	0	a N S l	1350	0	a N Y l	8100	0
a N A m	8100	0	a N C m	1350	0	a N D m	4050	0	a N E m	8100	0	a N L m	4050	0	a N M m	4050	0	a N N m	4050	0	a N S m	1350	0	a N Y m	8100	0
a N A n	8100	0	a N C n	1350	0	a N D n	4050	0	a N E n	8100	0	a N L n	4050	0	a N M n	4050	0	a N N n	4050	0	a N S n	1350	0	a N Y n	8100	0
a N A s	2700	0	a N C s	450	0	a N D s	1350	0	a N E s	2700	0	a N L s	1350	0	a N M s	1350	0	a N N s	1350	0	a N S s	450	0	a N Y s	2700	0
a N A y	16200	0	a N C y	2700	0	a N D y	8100	0	a N E y	16200	0	a N L y	8100	0	a N M y	8100	0	a N N y	8100	0	a N S y	2700	0	a N Y y	16200	0
																		c N N c	120	8	c N S c	75	1	c N Y c	450	2
c N A d	1350	0	c N C d	225	0	c N D d	675	0	c N E d	1350	0	c N L d	675	0	c N M d	675	0	c N N d	675	0	c N S d	225	0	c N Y d	1350	0
c N A e	2700	0	c N C e	450	2	c N D e	1350	0	c N E e	2700	4	c N L e	1350	0	c N M e	1350	2	c N N e	1350	2	c N S e	450	2	c N Y e	2700	4
c N A l	1350	0	c N C l	225	0	c N D l	675	0	c N E l	1350	0	c N L l	675	0	c N M l	675	0	c N N l	675	0	c N S l	225	0	c N Y l	1350	0
c N A m	1350	0	c N C m	225	1	c N D m	675	0	c N E m	1350	2	c N L m	675	0	c N M m	675	1	c N N m	675	1	c N S m	225	1	c N Y m	1350	2
c N A n	1350	0	c N C n	225	1	c N D n	675	0	c N E n	1350	2	c N L n	675	0	c N M n	675	1	c N N n	675	1	c N S n	225	1	c N Y n	1350	2
c N A s	450	0	c N C s	75	1	c N D s	225	0	c N E s	450	2	c N L s	225	0	c N M s	225	1	c N N s	225	1	c N S s	75	1	c N Y s	450	2
c N A y	2700	0	c N C y	450	2	c N D y	1350	0	c N E y	2700	4	c N L y	1350	0	c N M y	1350	2	c N N y	1350	2	c N S y	450	2	c N Y y	2700	4
																		d N N d	1035	0	d N S d	675	0	d N Y d	4050	0
d N A e	8100	0	d N C e	1350	0	d N D e	4050	0	d N E e	8100	0	d N L e	4050	0	d N M e	4050	0	d N N e	4050	0	d N S e	1350	0	d N Y e	8100	0
d N A l	4050	0	d N C l	675	0	d N D l	2025	0	d N E l	4050	0	d N L l	2025	0	d N M l	2025	0	d N N l	2025	24	d N S l	675	0	d N Y l	4050	0
d N A m	4050	0	d N C m	675	0	d N D m	2025	0	d N E m	4050	0	d N L m	2025	0	d N M m	2025	0	d N N m	2025	0	d N S m	675	0	d N Y m	4050	0
d N A n	4050	0	d N C n	675	0	d N D n	2025	0	d N E n	4050	0	d N L n	2025	0	d N M n	2025	0	d N N n	2025	0	d N S n	675	0	d N Y n	4050	0
d N A s	1350	0	d N C s	225	0	d N D s	675	0	d N E s	1350	0	d N L s	675	0	d N M s	675	0	d N N s	675	0	d N S s	225	0	d N Y s	1350	0
d N A y	8100	0	d N C y	1350	0	d N D y	4050	0	d N E y	8100	0	d N L y	4050	0	d N M y	4050	0	d N N y	4050	0	d N S y	1350	0	d N Y y	8100	0
																		e N N e	4095	32	e N S e	2700	4	e N Y e	16200	8
e N A l	8100	0	e N C l	1350	0	e N D l	4050	0	e N E l	8100	0	e N L l	4050	0	e N M l	4050	0	e N N l	4050	0	e N S l	1350	0	e N Y l	8100	0
e N A m	8100	0	e N C m	1350	2	e N D m	4050	0	e N E m	8100	4	e N L m	4050	0	e N M m	4050	2	e N N m	4050	2	e N S m	1350	2	e N Y m	8100	4
e N A n	8100	0	e N C n	1350	2	e N D n	4050	0	e N E n	8100	4	e N L n	4050	0	e N M n	4050	2	e N N n	4050	2	e N S n	1350	2	e N Y n	8100	4
e N A s	2700	0	e N C s	450	2	e N D s	1350	0	e N E s	2700	4	e N L s	1350	0	e N M s	1350	2	e N N s	1350	2	e N S s	450	2	e N Y s	2700	4
e N A y	16200	0	e N C y	2700	4	e N D y	8100	0	e N E y	16200	8	e N L y	8100	0	e N M y	8100	4	e N N y	8100	4	e N S y	2700	4	e N Y y	16200	8
																		l N N l	1035	0	l N S l	675	0	l N Y l	4050	0
l N A m	4050	0	l N C m	675	0	l N D m	2025	0	l N E m	4050	0	l N L m	2025	0	l N M m	2025	0	l N N m	2025	0	l N S m	675	0	l N Y m	4050	0
l N A n	4050	0	l N C n	675	0	l N D n	2025	0	l N E n	4050	0	l N L n	2025	0	l N M n	2025	0	l N N n	2025	0	l N S n	675	0	l N Y n	4050	0
l N A s	1350	0	l N C s	225	0	l N D s	675	0	l N E s	1350	0	l N L s	675	0	l N M s	675	0	l N N s	675	0	l N S s	225	0	l N Y s	1350	0
l N A y	8100	0	l N C y	1350	0	l N D y	4050	0	l N E y	8100	0	l N L y	4050	0	l N M y	4050	0	l N N y	4050	0	l N S y	1350	0	l N Y y	8100	0
																		m N N m	1035	23	m N S m	675	1	m N Y m	4050	2
m N A n	4050	0	m N C n	675	1	m N D n	2025	0	m N E n	4050	2	m N L n	2025	0	m N M n	2025	1	m N N n	2025	1	m N S n	675	1	m N Y n	4050	2
m N A s	1350	0	m N C s	225	1	m N D s	675	0	m N E s	1350	2	m N L s	675	0	m N M s	675	1	m N N s	675	1	m N S s	225	1	m N Y s	1350	2
m N A y	8100	0	m N C y	1350	2	m N D y	4050	0	m N E y	8100	4	m N L y	4050	0	m N M y	4050	2	m N N y	4050	2	m N S y	1350	2	m N Y y	8100	4
																		n N N n	1035	23	n N S n	675	1	n N Y n	4050	2
n N A s	1350	0	n N C s	225	1	n N D s	675	0	n N E s	1350	2	n N L s	675	0	n N M s	675	1	n N N s	675	1	n N S s	225	1	n N Y s	1350	2
n N A y	8100	0	n N C y	1350	2	n N D y	4050	0	n N E y	8100	4	n N L y	4050	0	n N M y	4050	2	n N N y	4050	2	n N S y	1350	2	n N Y y	8100	4
																		s N N s	120	8	s N S s	75	1	s N Y s	450	2
s N A y	2700	0	s N C y	450	2	s N D y	1350	0	s N E y	2700	4	s N L y	1350	0	s N M y	1350	2	s N N y	1350	2	s N S y	450	2	s N Y y	2700	4
																		y N N y	4095	32	y N S y	2700	4	y N Y y	16200	8

Table IV: All Linear Inositol Tetramers, their Stereoisomer Numbers and Achiral meso-forms

Tetr	Iso	Ac	Tetr	Iso	Ac	Tetr	Iso	Ac	Tetr	Iso	Ac	Tetr	Iso	Ac	Tetr	Iso	Ac	Tetr	Iso	Ac	Tetr	Iso	Ac	Tetr	Iso	Ac
SA			SC			SD			SE			SL			SM			SN			SS			SY		
																					a S S a	465	9	a S Y a	5400	0
a S A c	900	0	a S C c	150	0	a S D c	450	0	a S E c	900	0	a S L c	450	0	a S M c	450	0	a S N c	450	0	a S S c	150	0	a S Y c	900	0
a S A d	2700	0	a S C d	450	0	a S D d	1350	0	a S E d	2700	0	a S L d	1350	0	a S M d	1350	0	a S N d	1350	0	a S S d	450	0	a S Y d	2700	0
a S A e	5400	0	a S C e	900	0	a S D e	2700	0	a S E e	5400	0	a S L e	2700	0	a S M e	2700	0	a S N e	2700	0	a S S e	900	0	a S Y e	5400	0
a S A l	2700	0	a S C l	450	0	a S D l	1350	0	a S E l	2700	0	a S L l	1350	0	a S M l	1350	0	a S N l	1350	0	a S S l	450	0	a S Y l	2700	0
a S A m	2700	0	a S C m	450	0	a S D m	1350	0	a S E m	2700	0	a S L m	1350	0	a S M m	1350	0	a S N m	1350	0	a S S m	450	0	a S Y m	2700	0
a S A n	2700	0	a S C n	450	0	a S D n	1350	0	a S E n	2700	0	a S L n	1350	0	a S M n	1350	0	a S N n	1350	0	a S S n	450	0	a S Y n	2700	0
a S A s	900	0	a S C s	150	0	a S D s	450	0	a S E s	900	0	a S L s	450	0	a S M s	450	0	a S N s	450	0	a S S s	150	0	a S Y s	900	0
a S A y	5400	0	a S C y	900	0	a S D y	2700	0	a S E y	5400	0	a S L y	2700	0	a S M y	2700	0	a S N y	2700	0	a S S y	900	0	a S Y y	5400	0
																					c S S c	15	3	c S Y c	150	2
c S A d	450	0	c S C d	75	0	c S D d	225	0	c S E d	450	0	c S L d	225	0	c S M d	225	0	c S N d	225	0	c S S d	75	0	c S Y d	450	0
c S A e	900	0	c S C e	150	2	c S D e	450	0	c S E e	900	4	c S L e	450	0	c S M e	450	2	c S N e	450	2	c S S e	150	2	c S Y e	900	4
c S A l	450	0	c S C l	75	0	c S D l	225	0	c S E l	450	0	c S L l	225	0	c S M l	225	0	c S N l	225	0	c S S l	75	0	c S Y l	450	0
c S A m	450	0	c S C m	75	1	c S D m	225	0	c S E m	450	2	c S L m	225	0	c S M m	225	1	c S N m	225	1	c S S m	75	1	c S Y m	450	2
c S A n	450	0	c S C n	75	1	c S D n	225	0	c S E n	450	2	c S L n	225	0	c S M n	225	1	c S N n	225	1	c S S n	75	1	c S Y n	450	2
c S A s	150	0	c S C s	25	1	c S D s	75	0	c S E s	150	2	c S L s	75	0	c S M s	75	1	c S N s	75	1	c S S s	25	1	c S Y s	150	2
c S A y	900	0	c S C y	150	2	c S D y	450	0	c S E y	900	4	c S L y	450	0	c S M y	450	2	c S N y	450	2	c S S y	150	2	c S Y y	900	4
																					d S S d	120	0	d S Y d	1350	0
d S A e	2700	0	d S C e	450	0	d S D e	1350	0	d S E e	2700	0	d S L e	1350	0	d S M e	1350	0	d S N e	1350	0	d S S e	450	0	d S Y e	2700	0
d S A l	1350	0	d S C l	225	0	d S D l	675	0	d S E l	1350	0	d S L l	675	0	d S M l	675	0	d S N l	675	0	d S S l	225	9	d S Y l	1350	0
d S A m	1350	0	d S C m	225	0	d S D m	675	0	d S E m	1350	0	d S L m	675	0	d S M m	675	0	d S N m	675	0	d S S m	225	0	d S Y m	1350	0
d S A n	1350	0	d S C n	225	0	d S D n	675	0	d S E n	1350	0	d S L n	675	0	d S M n	675	0	d S N n	675	0	d S S n	225	0	d S Y n	1350	0
d S A s	450	0	d S C s	75	0	d S D s	225	0	d S E s	450	0	d S L s	225	0	d S M s	225	0	d S N s	225	0	d S S s	75	0	d S Y s	450	0
d S A y	2700	0	d S C y	450	0	d S D y	1350	0	d S E y	2700	0	d S L y	1350	0	d S M y	1350	0	d S N y	1350	0	d S S y	450	0	d S Y y	2700	0
																					e S S e	465	12	e S Y e	5400	8
e S A l	2700	0	e S C l	450	0	e S D l	1350	0	e S E l	2700	0	e S L l	1350	0	e S M l	1350	0	e S N l	1350	0	e S S l	450	0	e S Y l	2700	0
e S A m	2700	0	e S C m	450	2	e S D m	1350	0	e S E m	2700	4	e S L m	1350	0	e S M m	1350	2	e S N m	1350	2	e S S m	450	2	e S Y m	2700	4
e S A n	2700	0	e S C n	450	2	e S D n	1350	0	e S E n	2700	4	e S L n	1350	0	e S M n	1350	2	e S N n	1350	2	e S S n	450	2	e S Y n	2700	4
e S A s	900	0	e S C s	150	2	e S D s	450	0	e S E s	900	4	e S L s	450	0	e S M s	450	2	e S N s	450	2	e S S s	150	2	e S Y s	900	4
e S A y	5400	0	e S C y	900	4	e S D y	2700	0	e S E y	5400	8	e S L y	2700	0	e S M y	2700	4	e S N y	2700	4	e S S y	900	4	e S Y y	5400	8
																					l S S l	120	0	l S Y l	1350	0
l S A m	1350	0	l S C m	225	0	l S D m	675	0	l S E m	1350	0	l S L m	675	0	l S M m	675	0	l S N m	675	0	l S S m	225	0	l S Y m	1350	0
l S A n	1350	0	l S C n	225	0	l S D n	675	0	l S E n	1350	0	l S L n	675	0	l S M n	675	0	l S N n	675	0	l S S n	225	0	l S Y n	1350	0
l S A s	450	0	l S C s	75	0	l S D s	225	0	l S E s	450	0	l S L s	225	0	l S M s	225	0	l S N s	225	0	l S S s	75	0	l S Y s	450	0
l S A y	2700	0	l S C y	450	0	l S D y	1350	0	l S E y	2700	0	l S L y	1350	0	l S M y	1350	0	l S N y	1350	0	l S S y	450	0	l S Y y	2700	0
																					m S S m	120	8	m S Y m	1350	2
m S A n	1350	0	m S C n	225	1	m S D n	675	0	m S E n	1350	2	m S L n	675	0	m S M n	675	1	m S N n	675	1	m S S n	225	1	m S Y n	1350	2
m S A s	450	0	m S C s	75	1	m S D s	225	0	m S E s	450	2	m S L s	225	0	m S M s	225	1	m S N s	225	1	m S S s	75	1	m S Y s	450	2
m S A y	2700	0	m S C y	450	2	m S D y	1350	0	m S E y	2700	4	m S L y	1350	0	m S M y	1350	2	m S N y	1350	2	m S S y	450	2	m S Y y	2700	4
																					n S S n	120	8	n S Y n	1350	2
n S A s	450	0	n S C s	75	1	n S D s	225	0	n S E s	450	2	n S L s	225	0	n S M s	225	1	n S N s	225	1	n S S s	75	1	n S Y s	450	2
n S A y	2700	0	n S C y	450	2	n S D y	1350	0	n S E y	2700	4	n S L y	1350	0	n S M y	1350	2	n S N y	1350	2	n S S y	450	2	n S Y y	2700	4
																					s S S s	15	3	s S Y s	150	2
s S A y	900	0	s S C y	150	2	s S D y	450	0	s S E y	900	4	s S L y	450	0	s S M y	450	2	s S N y	450	2	s S S y	150	2	s S Y y	900	4
																					y S S y	465	12	y S Y y	5400	8

Table IV: All Linear Inositol Tetramers, their Stereoisomer Numbers and Achiral meso-forms

Tetr	Iso	Ac	Tetr	Iso	Ac	Tetr	Iso	Ac	Tetr	Iso	Ac	Tetr	Iso	Ac	Tetr	Iso	Ac	Tetr	Iso	Ac	Tetr	Iso	Ac	Tetr	Iso	Ac
YA			**YC**			**YD**			**YE**			**YL**			**YM**			**YN**			**YS**			**YY**		
																								a Y Y a	16290	19
a Y A c	5400	0	a Y C c	900	0	a Y D c	2700	0	a Y E c	5400	0	a Y L c	2700	0	a Y M c	2700	0	a Y N c	2700	0	a Y S c	900	0	a Y Y c	5400	0
a Y A d	16200	0	a Y C d	2700	0	a Y D d	8100	0	a Y E d	16200	0	a Y L d	8100	0	a Y M d	8100	0	a Y N d	8100	0	a Y S d	2700	0	a Y Y d	16200	0
a Y A e	32400	0	a Y C e	5400	0	a Y D e	16200	0	a Y E e	32400	0	a Y L e	16200	0	a Y M e	16200	0	a Y N e	16200	0	a Y S e	5400	0	a Y Y e	32400	0
a Y A l	16200	0	a Y C l	2700	0	a Y D l	8100	0	a Y E l	16200	0	a Y L l	8100	0	a Y M l	8100	0	a Y N l	8100	0	a Y S l	2700	0	a Y Y l	16200	0
a Y A m	16200	0	a Y C m	2700	0	a Y D m	8100	0	a Y E m	16200	0	a Y L m	8100	0	a Y M m	8100	0	a Y N m	8100	0	a Y S m	2700	0	a Y Y m	16200	0
a Y A n	16200	0	a Y C n	2700	0	a Y D n	8100	0	a Y E n	16200	0	a Y L n	8100	0	a Y M n	8100	0	a Y N n	8100	0	a Y S n	2700	0	a Y Y n	16200	0
a Y A s	5400	0	a Y C s	900	0	a Y D s	2700	0	a Y E s	5400	0	a Y L s	2700	0	a Y M s	2700	0	a Y N s	2700	0	a Y S s	900	0	a Y Y s	5400	0
a Y A y	32400	0	a Y C y	5400	0	a Y D y	16200	0	a Y E y	32400	0	a Y L y	16200	0	a Y M y	16200	0	a Y N y	16200	0	a Y S y	5400	0	a Y Y y	32400	0
																								c Y Y c	465	7
c Y A d	2700	0	c Y C d	450	0	c Y D d	1350	0	c Y E d	2700	0	c Y L d	1350	0	c Y M d	1350	0	c Y N d	1350	0	c Y S d	450	0	c Y Y d	2700	0
c Y A e	5400	0	c Y C e	900	4	c Y D e	2700	0	c Y E e	5400	8	c Y L e	2700	0	c Y M e	2700	4	c Y N e	2700	4	c Y S e	900	4	c Y Y e	5400	6
c Y A l	2700	0	c Y C l	450	0	c Y D l	1350	0	c Y E l	2700	0	c Y L l	1350	0	c Y M l	1350	0	c Y N l	1350	0	c Y S l	450	0	c Y Y l	2700	0
c Y A m	2700	0	c Y C m	450	2	c Y D m	1350	0	c Y E m	2700	4	c Y L m	1350	0	c Y M m	1350	2	c Y N m	1350	2	c Y S m	450	2	c Y Y m	2700	3
c Y A n	2700	0	c Y C n	450	2	c Y D n	1350	0	c Y E n	2700	4	c Y L n	1350	0	c Y M n	1350	2	c Y N n	1350	2	c Y S n	450	2	c Y Y n	2700	3
c Y A s	900	0	c Y C s	150	2	c Y D s	450	0	c Y E s	900	4	c Y L s	450	0	c Y M s	450	2	c Y N s	450	2	c Y S s	150	2	c Y Y s	900	3
c Y A y	5400	0	c Y C y	900	4	c Y D y	2700	0	c Y E y	5400	8	c Y L y	2700	0	c Y M y	2700	4	c Y N y	2700	4	c Y S y	900	4	c Y Y y	5400	6
																								d Y Y d	4095	0
d Y A c	16200	0	d Y C c	2700	0	d Y D c	8100	0	d Y E c	16200	0	d Y L c	8100	0	d Y M c	8100	0	d Y N c	8100	0	d Y S e	2700	0	d Y Y c	16200	0
d Y A l	8100	0	d Y C l	1350	0	d Y D l	4050	0	d Y E l	8100	0	d Y L l	4050	0	d Y M l	4050	0	d Y N l	4050	0	d Y S l	1350	0	d Y Y l	8100	19
d Y A m	8100	0	d Y C m	1350	0	d Y D m	4050	0	d Y E m	8100	0	d Y L m	4050	0	d Y M m	4050	0	d Y N m	4050	0	d Y S m	1350	0	d Y Y m	8100	0
d Y A n	8100	0	d Y C n	1350	0	d Y D n	4050	0	d Y E n	8100	0	d Y L n	4050	0	d Y M n	4050	0	d Y N n	4050	0	d Y S n	1350	0	d Y Y n	8100	0
d Y A s	2700	0	d Y C s	450	0	d Y D s	1350	0	d Y E s	2700	0	d Y L s	1350	0	d Y M s	1350	0	d Y N s	1350	0	d Y S s	450	0	d Y Y s	2700	0
d Y A y	16200	0	d Y C y	2700	0	d Y D y	8100	0	d Y E y	16200	0	d Y L y	8100	0	d Y M y	8100	0	d Y N y	8100	0	d Y S y	2700	0	d Y Y y	16200	0
																								e Y Y e	16290	25
e Y A l	16200	0	e Y C l	2700	0	e Y D l	8100	0	e Y E l	16200	0	e Y L l	8100	0	e Y M l	8100	0	e Y N l	8100	0	e Y S l	2700	0	e Y Y l	16200	0
e Y A m	16200	0	e Y C m	2700	4	e Y D m	8100	0	e Y E m	16200	8	e Y L m	8100	0	e Y M m	8100	4	e Y N m	8100	4	e Y S m	2700	4	e Y Y m	16200	6
e Y A n	16200	0	e Y C n	2700	4	e Y D n	8100	0	e Y E n	16200	8	e Y L n	8100	0	e Y M n	8100	4	e Y N n	8100	4	e Y S n	2700	4	e Y Y n	16200	6
e Y A s	5400	0	e Y C s	900	4	e Y D s	2700	0	e Y E s	5400	8	e Y L s	2700	0	e Y M s	2700	4	e Y N s	2700	4	e Y S s	900	4	e Y Y s	5400	6
e Y A y	32400	0	e Y C y	5400	8	e Y D y	16200	0	e Y E y	32400	16	e Y L y	16200	0	e Y M y	16200	8	e Y N y	16200	8	e Y S y	5400	8	e Y Y y	32400	12
					0						0						0			0			0	l Y Y l	4095	0
l Y A m	8100	0	l Y C m	1350	0	l Y D m	4050	0	l Y E m	8100	0	l Y L m	4050	0	l Y M m	4050	0	l Y N m	4050	0	l Y S m	1350	0	l Y Y m	8100	0
l Y A n	8100	0	l Y C n	1350	0	l Y D n	4050	0	l Y E n	8100	0	l Y L n	4050	0	l Y M n	4050	0	l Y N n	4050	0	l Y S n	1350	0	l Y Y n	8100	0
l Y A s	2700	0	l Y C s	450	0	l Y D s	1350	0	l Y E s	2700	0	l Y L s	1350	0	l Y M s	1350	0	l Y N s	1350	0	l Y S s	450	0	l Y Y s	2700	0
l Y A y	16200	0	l Y C y	2700	0	l Y D y	8100	0	l Y E y	16200	0	l Y L y	8100	0	l Y M y	8100	0	l Y N y	8100	0	l Y S y	2700	0	l Y Y y	16200	0
																								m Y Y m	4095	17
m Y A n	8100	0	m Y C n	1350	2	m Y D n	4050	0	m Y E n	8100	4	m Y L n	4050	0	m Y M n	4050	2	m Y N n	4050	2	m Y S n	1350	2	m Y Y n	8100	3
m Y A s	2700	0	m Y C s	450	2	m Y D s	1350	0	m Y E s	2700	4	m Y L s	1350	0	m Y M s	1350	2	m Y N s	1350	2	m Y S s	450	2	m Y Y s	2700	3
m Y A y	16200	0	m Y C y	2700	4	m Y D y	8100	0	m Y E y	16200	8	m Y L y	8100	0	m Y M y	8100	4	m Y N y	8100	4	m Y S y	2700	4	m Y Y y	16200	6
																								n Y Y n	4095	17
n Y A s	2700	0	n Y C s	450	2	n Y D s	1350	0	n Y E s	2700	4	n Y L s	1350	0	n Y M s	1350	2	n Y N s	1350	2	n Y S s	450	2	n Y Y s	2700	3
n Y A y	16200	0	n Y C y	2700	4	n Y D y	8100	0	n Y E y	16200	8	n Y L y	8100	0	n Y M y	8100	4	n Y N y	8100	4	n Y S y	2700	4	n Y Y y	16200	6
																								s Y Y s	465	7
s Y A y	5400	0	s Y C y	900	4	s Y D y	2700	0	s Y E y	5400	8	s Y L y	2700	0	s Y M y	2700	4	s Y N y	2700	4	s Y S y	900	4	s Y Y y	5400	6
																								y Y Y y	16290	25

Table IV: All Linear Inositol Tetramers, their Stereoisomer Numbers and Achiral meso-forms

Branched Tetramers:

Here again, careful distinctions according to the substitutional patterns are necessary:

Z-aaa: $AAA_Z * mono_a$
Z-aaa': $AAB_Z * mono_a * (mono_a - 1)$
Z-aa'a'': $ABC_Z * mono_a * (mono_a - 1) * (mono_a - 2) / 6$
Z-aab: $AAB_Z * mono_a * monob_b$
Z-aa'b: $ABC_Z * mono_a * (mono_a - 1) * mono_b / 2$
Z-abc: $ABC_Z * mono_a * mono_b * mono_c$

The results are summarized in *Table V*. From this compilation we learn, that there are 1,485 general branched types of tetramers with 3,495,296 stereoisomers. The latter sum of the number of inositol isomers can also be derived from the general formulas for trisubstituted inositols[1] (n = the sum of monopositions of all inositols = 32) as shown below in Table VI.

Central Inositol	*Isomers*	*Achirals*	*Isomers*	*Achirals (Theory)*	*Achirals (incl. meso forms)*
A	$20 n^3$	0	655,360	0	0
C, S (2)	$2n * (5 n^2 + 1) / 3$	$2 n^2$	109,248	128	352
D, L(2)	$10 n^3$	0	327,680	0	0
E, Y (2)	$20 n^3$	$4 n^2$	655,360	256	704
M, N (2)	$10 n^3$	$2 n^2$	327,680	128	352
Sum			3,495,296	1,024	2,816

Table VI: General Formulas at Trisubstituted Inositols and Resulting Branched Tetramers

As can be seen from Table V, in addition to the achiral forms estimated by the general formula given above, there are quite some other achiral *meso* forms possible which have to be evaluated manually. The exact number - as we estimate - is 2,816. The main contribution to these additional achiral isomers again stems from symmetrical structures.

Tetr				Iso	Ac	Tetr				Iso	Ac	Tetr				Iso	Ac	Tetr				Iso	Ac	Tetr				Iso	Ac	Tetr				Iso	Ac	Tetr				Iso	Ac	Tetr				Iso	Ac	Tetr				Iso	Ac
A	a	a	a	4320	0																																																
A	a	a	c	2160	0																																																
A	a	a	d	6480	0																																																
A	a	a	e	12960	0																																																
A	a	a	l	6480	0																																																
A	a	a	m	6480	0																																																
A	a	a	n	6480	0																																																
A	a	a	s	2160	0																																																
A	a	a	y	12960	0																																																
A	a	c	c	360	0	A	c	c	c	20	0																																								
A	a	c	d	2160	0	A	c	c	d	180	0																																								
A	a	c	e	4320	0	A	c	c	e	360	0																																								
A	a	c	l	2160	0	A	c	c	l	180	0																																								
A	a	c	m	2160	0	A	c	c	m	180	0																																								
A	a	c	n	2160	0	A	c	c	n	180	0																																								
A	a	c	s	720	0	A	c	c	s	60	0																																								
A	a	c	y	4320	0	A	c	c	y	360	0																																								
A	a	d	d	3240	0	A	c	d	d	540	0	A	d	d	d	540	0																																		
A	a	d	e	12960	0	A	c	d	e	2160	0	A	d	d	e	3240	0																																		
A	a	d	l	6480	0	A	c	d	l	1080	0	A	d	d	l	1620	0																																		
A	a	d	m	6480	0	A	c	d	m	1080	0	A	d	d	m	1620	0																																		
A	a	d	n	6480	0	A	c	d	n	1080	0	A	d	d	n	1620	0																																		
A	a	d	s	2160	0	A	c	d	s	360	0	A	d	d	s	540	0																																		
A	a	d	y	12960	0	A	c	d	y	2160	0	A	d	d	y	3240	0																																		
A	a	e	e	12960	0	A	c	e	e	2160	0	A	d	e	e	6480	0	A	e	e	e	4320	0																												
A	a	e	l	12960	0	A	c	e	l	2160	0	A	d	e	l	6480	0	A	e	e	l	6480	0																												
A	a	e	m	12960	0	A	c	e	m	2160	0	A	d	e	m	6480	0	A	e	e	m	6480	0																												
A	a	e	n	12960	0	A	c	e	n	2160	0	A	d	e	n	6480	0	A	e	e	n	6480	0																												
A	a	e	s	4320	0	A	c	e	s	720	0	A	d	e	s	2160	0	A	e	e	s	2160	0																												
A	a	e	y	25920	0	A	c	e	y	4320	0	A	d	e	y	12960	0	A	e	e	y	12960	0																												
A	a	l	l	3240	0	A	c	l	l	540	0	A	d	l	l	1620	0	A	e	l	l	3240	0	A	l	l	l	540	0																								
A	a	l	m	6480	0	A	c	l	m	1080	0	A	d	l	m	3240	0	A	e	l	m	6480	0	A	l	l	m	1620	0																								
A	a	l	n	6480	0	A	c	l	n	1080	0	A	d	l	n	3240	0	A	e	l	n	6480	0	A	l	l	n	1620	0																								
A	a	l	s	2160	0	A	c	l	s	360	0	A	d	l	s	1080	0	A	e	l	s	2160	0	A	l	l	s	540	0																								
A	a	l	y	12960	0	A	c	l	y	2160	0	A	d	l	y	6480	0	A	e	l	y	12960	0	A	l	l	y	3240	0																								
A	a	m	m	3240	0	A	c	m	m	540	0	A	d	m	m	1620	0	A	e	m	m	3240	0	A	l	m	m	1620	0	A	m	m	m	540	0																		
A	a	m	n	6480	0	A	c	m	n	1080	0	A	d	m	n	3240	0	A	e	m	n	6480	0	A	l	m	n	3240	0	A	m	m	n	1620	0																		
A	a	m	s	2160	0	A	c	m	s	360	0	A	d	m	s	1080	0	A	e	m	s	2160	0	A	l	m	s	1080	0	A	m	m	s	540	0																		
A	a	m	y	12960	0	A	c	m	y	2160	0	A	d	m	y	6480	0	A	e	m	y	12960	0	A	l	m	y	6480	0	A	m	m	y	3240	0																		
A	a	n	n	3240	0	A	c	n	n	540	0	A	d	n	n	1620	0	A	e	n	n	3240	0	A	l	n	n	1620	0	A	m	n	n	1620	0	A	n	n	n	540	0												
A	a	n	s	2160	0	A	c	n	s	360	0	A	d	n	s	1080	0	A	e	n	s	2160	0	A	l	n	s	1080	0	A	m	n	s	1080	0	A	n	n	s	540	0												
A	a	n	y	12960	0	A	c	n	y	2160	0	A	d	n	y	6480	0	A	e	n	y	12960	0	A	l	n	y	6480	0	A	m	n	y	6480	0	A	n	n	y	3240	0												
A	a	s	s	360	0	A	c	s	s	60	0	A	d	s	s	180	0	A	e	s	s	360	0	A	l	s	s	180	0	A	m	s	s	180	0	A	n	s	s	180	0	A	s	s	s	20	0						
A	a	s	y	4320	0	A	c	s	y	720	0	A	d	s	y	2160	0	A	e	s	y	4320	0	A	l	s	y	2160	0	A	m	s	y	2160	0	A	n	s	y	2160	0	A	s	s	y	360	0						
A	a	y	y	**12960**	**0**	A	c	y	y	**2160**	**0**	A	d	y	y	**6480**	**0**	A	e	y	y	**12960**	**0**	A	l	y	y	**6480**	**0**	A	m	y	y	**6480**	**0**	A	n	y	y	**6480**	**0**	A	s	y	y	**2160**	**0**	A	y	y	y	**4320**	**0**

A

Table V: All Branched Inositol Tetramers, their Stereoisomer Numbers and Achiral meso-forms

Tetr	Iso	Ac	Tetr	Iso	Ac	Tetr	Iso	Ac	Tetr	Iso	Ac	Tetr	Iso	Ac	Tetr	Iso	Ac	Tetr	Iso	Ac	Tetr	Iso	Ac	Tetr	Iso	Ac
C a a a	724	0																								
C a a c	360	6																								
C a a d	1080	0																								
C a a e	2160	12																								
C a a l	1080	0																								
C a a m	1080	6																								
C a a n	1080	6																								
C a a s	360	6																								
C a a y	2160	12																								
C a c c	60	0	C c c c	4	2																					
C a c d	360	0	C c c d	30	0																					
C a c e	720	0	C c c e	60	4																					
C a c l	360	0	C c c l	30	0																					
C a c m	360	0	C c c m	30	2																					
C a c n	360	0	C c c n	30	2																					
C a c s	120	0	C c c s	10	2																					
C a c y	720	0	C c c y	60	4																					
C a d d	540	0	C c d d	90	0	C d d d	92	0																		
C a d e	2160	0	C c d e	360	0	C d d e	540	0																		
C a d l	1080	0	C c d l	180	6	C d d l	270	0																		
C a d m	1080	0	C c d m	180	0	C d d m	270	0																		
C a d n	1080	0	C c d n	180	0	C d d n	270	0																		
C a d s	360	0	C c d s	60	0	C d d s	90	0																		
C a d y	2160	0	C c d y	360	0	C d d y	540	0																		
C a e e	2160	0	C c e e	360	8	C d e e	1080	0	C e e e	724	16															
C a e l	2160	0	C c e l	360	0	C d e l	1080	12	C e e l	1080	0															
C a e m	2160	0	C c e m	360	0	C d e m	1080	0	C e e m	1080	8															
C a e n	2160	0	C c e n	360	0	C d e n	1080	0	C e e n	1080	8															
C a e s	720	0	C c e s	120	0	C d e s	360	0	C e e s	360	8															
C a e y	4320	0	C c e y	720	0	C d e y	2160	0	C e e y	2160	16															
C a l l	540	0	C c l l	90	0	C d l l	270	0	C e l l	540	0	C l l l	92	0												
C a l m	1080	0	C c l m	180	0	C d l m	540	6	C e l m	1080	0	C l l m	270	0												
C a l n	1080	0	C c l n	180	0	C d l n	540	6	C e l n	1080	0	C l l n	270	0												
C a l s	360	0	C c l s	60	0	C d l s	180	6	C e l s	360	0	C l l s	90	0												
C a l y	2160	0	C c l y	360	0	C d l y	1080	12	C e l y	2160	0	C l l y	540	0												
C a m m	540	0	C c m m	90	6	C d m m	270	0	C e m m	540	12	C l m m	270	0	C m m m	92	6									
C a m n	1080	0	C c m n	180	0	C d m n	540	0	C e m n	1080	0	C l m n	540	0	C m m n	270	6									
C a m s	360	0	C c m s	60	0	C d m s	180	0	C e m s	360	0	C l m s	180	0	C m m s	90	6									
C a m y	2160	0	C c m y	360	0	C d m y	1080	0	C e m y	2160	0	C l m y	1080	0	C m m y	540	12									
C a n n	540	0	C c n n	90	6	C d n n	270	0	C e n n	540	12	C l n n	270	0	C m n n	270	6	C n n n	92	6						
C a n s	360	0	C c n s	60	0	C d n s	180	0	C e n s	360	0	C l n s	180	0	C m n s	180	0	C n n s	90	6						
C a n y	2160	0	C c n y	360	0	C d n y	1080	0	C e n y	2160	0	C l n y	1080	0	C m n y	1080	0	C n n y	540	12						
C a s s	60	0	C c s s	10	2	C d s s	30	0	C e s s	60	4	C l s s	30	0	C m s s	30	2	C n s s	30	2	C s s s	4	2			
C a s y	720	0	C c s y	120	0	C d s y	360	0	C e s y	720	0	C l s y	360	0	C m s y	360	0	C n s y	360	0	C s s y	60	4			
C a y y	2160	0	C c y y	360	8	C d y y	1080	0	C e y y	2160	16	C l y y	1080	0	C m y y	1080	8	C n y y	1080	8	C s y y	360	8	C y y y	724	16

C

Table V: All Branched Inositol Tetramers, their Stereoisomer Numbers and Achiral meso-forms

Tetr	Iso	Ac	Tetr	Iso	Ac	Tetr	Iso	Ac	Tetr	Iso	Ac	Tetr	Iso	Ac	Tetr	Iso	Ac	Tetr	Iso	Ac	Tetr	Iso	Ac	Tetr	Iso	Ac
D a a a	2160	0																								
D a a c	1080	0																								
D a a d	3240	0																								
D a a e	6480	0																								
D a a l	3240	0																								
D a a m	3240	0																					D					
D a a n	3240	0																										
D a a s	1080	0																								
D a a y	6480	0																								
D a c c	180	0	D c c c	10	0																					
D a c d	1080	0	D c c d	90	0																					
D a c e	2160	0	D c c e	180	0																					
D a c l	1080	0	D c c l	90	0																					
D a c m	1080	0	D c c m	90	0																					
D a c n	1080	0	D c c n	90	0																					
D a c s	360	0	D c c s	30	0																					
D a c y	2160	0	D c c y	180	0																					
D a d d	1620	0	D c d d	270	0	D d d d	270	0																		
D a d e	6480	0	D c d e	1080	0	D d d e	1620	0																		
D a d l	3240	0	D c d l	540	0	D d d l	810	0																		
D a d m	3240	0	D c d m	540	0	D d d m	810	0																		
D a d n	3240	0	D c d n	540	0	D d d n	810	0																		
D a d s	1080	0	D c d s	180	0	D d d s	270	0																		
D a d y	6480	0	D c d y	1080	0	D d d y	1620	0																		
D a e e	6480	0	D c e e	1080	0	D d e e	3240	0	D e e e	2160	0															
D a e l	6480	0	D c e l	1080	0	D d e l	3240	0	D e e l	3240	0															
D a e m	6480	0	D c e m	1080	0	D d e m	3240	0	D e e m	3240	0															
D a e n	6480	0	D c e n	1080	0	D d e n	3240	0	D e e n	3240	0															
D a e s	2160	0	D c e s	360	0	D d e s	1080	0	D e e s	1080	0															
D a e y	12960	0	D c e y	2160	0	D d e y	6480	0	D e e y	6480	0															
D a l l	1620	0	D c l l	270	0	D d l l	810	0	D e l l	1620	0	D l l l	270	0												
D a l m	3240	0	D c l m	540	0	D d l m	1620	0	D e l m	3240	0	D l l m	810	0												
D a l n	3240	0	D c l n	540	0	D d l n	1620	0	D e l n	3240	0	D l l n	810	0												
D a l s	1080	0	D c l s	180	0	D d l s	540	0	D e l s	1080	0	D l l s	270	0												
D a l y	6480	0	D c l y	1080	0	D d l y	3240	0	D e l y	6480	0	D l l y	1620	0												
D a m m	1620	0	D c m m	270	0	D d m m	810	0	D e m m	1620	0	D l m m	810	0	D m m m	270	0									
D a m n	3240	0	D c m n	540	0	D d m n	1620	0	D e m n	3240	0	D l m n	1620	0	D m m n	810	0									
D a m s	1080	0	D c m s	180	0	D d m s	540	0	D e m s	1080	0	D l m s	540	0	D m m s	270	0									
D a m y	6480	0	D c m y	1080	0	D d m y	3240	0	D e m y	6480	0	D l m y	3240	0	D m m y	1620	0									
D a n n	1620	0	D c n n	270	0	D d n n	810	0	D e n n	1620	0	D l n n	810	0	D m n n	810	0	D n n n	270	0						
D a n s	1080	0	D c n s	180	0	D d n s	540	0	D e n s	1080	0	D l n s	540	0	D m n s	540	0	D n n s	270	0						
D a n y	6480	0	D c n y	1080	0	D d n y	3240	0	D e n y	6480	0	D l n y	3240	0	D m n y	3240	0	D n n y	1620	0						
D a s s	180	0	D c s s	30	0	D d s s	90	0	D e s s	180	0	D l s s	90	0	D m s s	90	0	D n s s	90	0	D s s s	10	0			
D a s y	2160	0	D c s y	360	0	D d s y	1080	0	D e s y	2160	0	D l s y	1080	0	D m s y	1080	0	D n s y	1080	0	D s s y	180	0			
D a y y	6480	0	D c y y	1080	0	D d y y	3240	0	D e y y	6480	0	D l y y	3240	0	D m y y	3240	0	D n y y	3240	0	D s y y	1080	0	D y y y	2160	0

Table V: All Branched Inositol Tetramers, their Stereoisomer Numbers and Achiral meso-forms

Tetr				Iso	Ac	Tetr				Iso	Ac	Tetr				Iso	Ac	Tetr				Iso	Ac	Tetr				Iso	Ac	Tetr				Iso	Ac	Tetr				Iso	Ac	Tetr				Iso	Ac	Tetr				Iso	Ac
E	a	a	a	4320	0																																																
E	a	a	c	2160	12																																																
E	a	a	d	6480	0																																																
E	a	a	e	12960	24																																																
E	a	a	l	6480	0																																																
E	a	a	m	6480	12																																						E											
E	a	a	n	6480	12																																																
E	a	a	s	2160	12																																																
E	a	a	y	12960	24																																																
E	a	c	c	360	0	E	c	c	c	20	4																																								
E	a	c	d	2160	0	E	c	c	d	180	0																																								
E	a	c	e	4320	0	E	c	c	e	360	8																																								
E	a	c	l	2160	0	E	c	c	l	180	0																																								
E	a	c	m	2160	0	E	c	c	m	180	4																																								
E	a	c	n	2160	0	E	c	c	n	180	4																																								
E	a	c	s	720	0	E	c	c	s	60	4																																								
E	a	c	y	4320	0	E	c	c	y	360	8																																								
E	a	d	d	3240	0	E	c	d	d	540	0	E	d	d	d	540	0																																				
E	a	d	e	12960	0	E	c	d	e	2160	0	E	d	d	e	3240	0																																				
E	a	d	l	6480	0	E	c	d	l	1080	12	E	d	d	l	1620	0																																				
E	a	d	m	6480	0	E	c	d	m	1080	0	E	d	d	m	1620	0																																				
E	a	d	n	6480	0	E	c	d	n	1080	0	E	d	d	n	1620	0																																				
E	a	d	s	2160	0	E	c	d	s	360	0	E	d	d	s	540	0																																				
E	a	d	y	12960	0	E	c	d	y	2160	0	E	d	d	y	3240	0																																				
E	a	e	e	12960	0	E	c	e	e	2160	16	E	d	e	e	6480	0	E	e	e	e	4320	32																														
E	a	e	l	12960	0	E	c	e	l	2160	0	E	d	e	l	6480	24	E	e	e	l	6480	0																														
E	a	e	m	12960	0	E	c	e	m	2160	0	E	d	e	m	6480	0	E	e	e	m	6480	16																														
E	a	e	n	12960	0	E	c	e	n	2160	0	E	d	e	n	6480	0	E	e	e	n	6480	16																														
E	a	e	s	4320	0	E	c	e	s	720	0	E	d	e	s	2160	0	E	e	e	s	2160	16																														
E	a	e	y	25920	0	E	c	e	y	4320	0	E	d	e	y	12960	0	E	e	e	y	12960	32																														
E	a	l	l	3240	0	E	c	l	l	540	0	E	d	l	l	1620	0	E	e	l	l	3240	0	E	l	l	l	540	0																								
E	a	l	m	6480	0	E	c	l	m	1080	0	E	d	l	m	3240	12	E	e	l	m	6480	0	E	l	l	m	1620	0																								
E	a	l	n	6480	0	E	c	l	n	1080	0	E	d	l	n	3240	12	E	e	l	n	6480	0	E	l	l	n	1620	0																								
E	a	l	s	2160	0	E	c	l	s	360	0	E	d	l	s	1080	12	E	e	l	s	2160	0	E	l	l	s	540	0																								
E	a	l	y	12960	0	E	c	l	y	2160	0	E	d	l	y	6480	24	E	e	l	y	12960	0	E	l	l	y	3240	0																								
E	a	m	m	3240	0	E	c	m	m	540	12	E	d	m	m	1620	0	E	e	m	m	3240	24	E	l	m	m	1620	0	E	m	m	m	540	12																		
E	a	m	n	6480	0	E	c	m	n	1080	0	E	d	m	n	3240	0	E	e	m	n	6480	0	E	l	m	n	3240	0	E	m	m	n	1620	12																		
E	a	m	s	2160	0	E	c	m	s	360	0	E	d	m	s	1080	0	E	e	m	s	2160	0	E	l	m	s	1080	0	E	m	m	s	540	12																		
E	a	m	y	12960	0	E	c	m	y	2160	0	E	d	m	y	6480	0	E	e	m	y	12960	0	E	l	m	y	6480	0	E	m	m	y	3240	24																		
E	a	n	n	3240	0	E	c	n	n	540	12	E	d	n	n	1620	0	E	e	n	n	3240	24	E	l	n	n	1620	0	E	m	n	n	1620	12	E	n	n	n	540	12												
E	a	n	s	2160	0	E	c	n	s	360	0	E	d	n	s	1080	0	E	e	n	s	2160	0	E	l	n	s	1080	0	E	m	n	s	1080	0	E	n	n	s	540	12												
E	a	n	y	12960	0	E	c	n	y	2160	0	E	d	n	y	6480	0	E	e	n	y	12960	0	E	l	n	y	6480	0	E	m	n	y	6480	0	E	n	n	y	3240	24												
E	a	s	s	360	0	E	c	s	s	60	4	E	d	s	s	180	0	E	e	s	s	360	8	E	l	s	s	180	0	E	m	s	s	180	4	E	n	s	s	180	4	E	s	s	s	20	4						
E	a	s	y	4320	0	E	c	s	y	720	0	E	d	s	y	2160	0	E	e	s	y	4320	0	E	l	s	y	2160	0	E	m	s	y	2160	0	E	n	s	y	2160	0	E	s	s	y	360	8						
E	a	y	y	1296	0	E	c	y	y	2160	1	E	d	y	y	6480	0	E	e	y	y	1296	3	E	l	y	y	6480	0	E	m	y	y	6480	1	E	n	y	y	6480	1	E	s	y	y	2160	1	E	y	y	y	4320	3

Table V: All Branched Inositol Tetramers, their Stereoisomer Numbers and Achiral meso-forms

Tetr				Iso	Ac	Tetr				Iso	Ac	Tetr				Iso	Ac	Tetr				Iso	Ac	Tetr				Iso	Ac	Tetr				Iso	Ac	Tetr				Iso	Ac	Tetr				Iso	Ac	Tetr				Iso	Ac
L	a	a	a	2160	0																																																
L	a	a	c	1080	0																																																
L	a	a	d	3240	0																																																
L	a	a	e	6480	0																																																
L	a	a	l	3240	0																																																
L	a	a	m	3240	0																																																
L	a	a	n	3240	0																																																
L	a	a	s	1080	0																																																
L	a	a	y	6480	0																																								L											
L	a	c	c	180	0	L	c	c	c	10	0																																									
L	a	c	d	1080	0	L	c	c	d	90	0																																									
L	a	c	e	2160	0	L	c	c	e	180	0																																									
L	a	c	l	1080	0	L	c	c	l	90	0																																									
L	a	c	m	1080	0	L	c	c	m	90	0																																									
L	a	c	n	1080	0	L	c	c	n	90	0																																									
L	a	c	s	360	0	L	c	c	s	30	0																																									
L	a	c	y	2160	0	L	c	c	y	180	0																																									
L	a	d	d	1620	0	L	c	d	d	270	0	L	d	d	d	270	0																																				
L	a	d	e	6480	0	L	c	d	e	1080	0	L	d	d	e	1620	0																																				
L	a	d	l	3240	0	L	c	d	l	540	0	L	d	d	l	810	0																																				
L	a	d	m	3240	0	L	c	d	m	540	0	L	d	d	m	810	0																																				
L	a	d	n	3240	0	L	c	d	n	540	0	L	d	d	n	810	0																																				
L	a	d	s	1080	0	L	c	d	s	180	0	L	d	d	s	270	0																																				
L	a	d	y	6480	0	L	c	d	y	1080	0	L	d	d	y	1620	0																																				
L	a	e	e	6480	0	L	c	e	e	1080	0	L	d	e	e	3240	0	L	e	e	e	2160	0																														
L	a	e	l	6480	0	L	c	e	l	1080	0	L	d	e	l	3240	0	L	e	e	l	3240	0																														
L	a	e	m	6480	0	L	c	e	m	1080	0	L	d	e	m	3240	0	L	e	e	m	3240	0																														
L	a	e	n	6480	0	L	c	e	n	1080	0	L	d	e	n	3240	0	L	e	e	n	3240	0																														
L	a	e	s	2160	0	L	c	e	s	360	0	L	d	e	s	1080	0	L	e	e	s	1080	0																														
L	a	e	y	12960	0	L	c	e	y	2160	0	L	d	e	y	6480	0	L	e	e	y	6480	0																														
L	a	l	l	1620	0	L	c	l	l	270	0	L	d	l	l	810	0	L	e	l	l	1620	0	L	l	l	l	270	0																								
L	a	l	m	3240	0	L	c	l	m	540	0	L	d	l	m	1620	0	L	e	l	m	3240	0	L	l	l	m	810	0																								
L	a	l	n	3240	0	L	c	l	n	540	0	L	d	l	n	1620	0	L	e	l	n	3240	0	L	l	l	n	810	0																								
L	a	l	s	1080	0	L	c	l	s	180	0	L	d	l	s	540	0	L	e	l	s	1080	0	L	l	l	s	270	0																								
L	a	l	y	6480	0	L	c	l	y	1080	0	L	d	l	y	3240	0	L	e	l	y	6480	0	L	l	l	y	1620	0																								
L	a	m	m	1620	0	L	c	m	m	270	0	L	d	m	m	810	0	L	e	m	m	1620	0	L	l	m	m	810	0	L	m	m	m	270	0																		
L	a	m	n	3240	0	L	c	m	n	540	0	L	d	m	n	1620	0	L	e	m	n	3240	0	L	l	m	n	1620	0	L	m	m	n	810	0																		
L	a	m	s	1080	0	L	c	m	s	180	0	L	d	m	s	540	0	L	e	m	s	1080	0	L	l	m	s	540	0	L	m	m	s	270	0																		
L	a	m	y	6480	0	L	c	m	y	1080	0	L	d	m	y	3240	0	L	e	m	y	6480	0	L	l	m	y	3240	0	L	m	m	y	1620	0																		
L	a	n	n	1620	0	L	c	n	n	270	0	L	d	n	n	810	0	L	e	n	n	1620	0	L	l	n	n	810	0	L	m	n	n	810	0	L	n	n	n	270	0												
L	a	n	s	1080	0	L	c	n	s	180	0	L	d	n	s	540	0	L	e	n	s	1080	0	L	l	n	s	540	0	L	m	n	s	540	0	L	n	n	s	270	0												
L	a	n	y	6480	0	L	c	n	y	1080	0	L	d	n	y	3240	0	L	e	n	y	6480	0	L	l	n	y	3240	0	L	m	n	y	3240	0	L	n	n	y	1620	0												
L	a	s	s	180	0	L	c	s	s	30	0	L	d	s	s	90	0	L	e	s	s	180	0	L	l	s	s	90	0	L	m	s	s	90	0	L	n	s	s	90	0	L	s	s	s	10	0						
L	a	s	y	2160	0	L	c	s	y	360	0	L	d	s	y	1080	0	L	e	s	y	2160	0	L	l	s	y	1080	0	L	m	s	y	1080	0	L	n	s	y	1080	0	L	s	s	y	180	0						
L	a	y	y	6480	0	L	c	y	y	1080	0	L	d	y	y	3240	0	L	e	y	y	6480	0	L	l	y	y	3240	0	L	m	y	y	3240	0	L	n	y	y	3240	0	L	s	y	y	1080	0	L	y	y	y	2160	0

Table V: All Branched Inositol Tetramers, their Stereoisomer Numbers and Achiral meso-forms

Tetr	Iso	Ac	Tetr	Iso	Ac	Tetr	Iso	Ac	Tetr	Iso	Ac	Tetr	Iso	Ac	Tetr	Iso	Ac	Tetr	Iso	Ac	Tetr	Iso	Ac	Tetr	Iso	Ac
M a a a	2160	0																								
M a a c	1080	6																								
M a a d	3240	0																								
M a a e	6480	12																								
M a a l	3240	0																								
M a a m	3240	6																					M					
M a a n	3240	6																								
M a a s	1080	6																								
M a a y	6480	12																								
M a c c	180	0	M c c c	10	2																					
M a c d	1080	0	M c c d	90	0																					
M a c e	2160	0	M c c e	180	4																					
M a c l	1080	0	M c c l	90	0																					
M a c m	1080	0	M c c m	90	2																					
M a c n	1080	0	M c c n	90	2																					
M a c s	360	0	M c c s	30	2																					
M a c y	2160	0	M c c y	180	4																					
M a d d	1620	0	M c d d	270	0	M d d d	270	0																		
M a d e	6480	0	M c d e	1080	0	M d d e	1620	0																		
M a d l	3240	0	M c d l	540	6	M d d l	810	0																		
M a d m	3240	0	M c d m	540	0	M d d m	810	0																		
M a d n	3240	0	M c d n	540	6	M d d n	810	0																		
M a d s	1080	0	M c d s	180	0	M d d s	270	0																		
M a d y	6480	0	M c d y	1080	0	M d d y	1620	0																		
M a e e	6480	0	M c e e	1080	8	M d e e	3240	0	M e e e	2160	16															
M a e l	6480	0	M c e l	1080	0	M d e l	3240	12	M e e l	3240	0															
M a e m	6480	0	M c e m	1080	0	M d e m	3240	0	M e e m	3240	8															
M a e n	6480	0	M c e n	1080	0	M d e n	3240	0	M e e n	3240	8															
M a e s	2160	0	M c e s	360	0	M d e s	1080	0	M e e s	1080	8															
M a e y	12960	0	M c e y	2160	0	M d e y	6480	0	M e e y	6480	16															
M a l l	1620	0	M c l l	270	0	M d l l	810	0	M e l l	1620	0	M l l l	270	0												
M a l m	3240	0	M c l m	540	0	M d l m	1620	6	M e l m	3240	0	M l l m	810	0												
M a l n	3240	0	M c l n	540	0	M d l n	1620	6	M e l n	3240	0	M l l n	810	0												
M a l s	1080	0	M c l s	180	0	M d l s	540	6	M e l s	1080	0	M l l s	270	0												
M a l y	6480	0	M c l y	1080	0	M d l y	3240	12	M e l y	6480	0	M l l y	1620	0												
M a m m	1620	0	M c m m	270	6	M d m m	810	0	M e m m	1620	12	M l m m	810	0	M m m m	270	6									
M a m n	3240	0	M c m n	540	0	M d m n	1620	0	M e m n	3240	0	M l m n	1620	0	M m m n	810	6									
M a m s	1080	0	M c m s	180	0	M d m s	540	0	M e m s	1080	0	M l m s	540	0	M m m s	270	6									
M a m y	6480	0	M c m y	1080	0	M d m y	3240	0	M e m y	6480	0	M l m y	3240	0	M m m y	1620	12									
M a n n	1620	0	M c n n	270	6	M d n n	810	0	M e n n	1620	12	M l n n	810	0	M m n n	810	6	M n n n	270	6						
M a n s	1080	0	M c n s	180	0	M d n s	540	0	M e n s	1080	0	M l n s	540	0	M m n s	540	0	M n n s	270	6						
M a n y	6480	0	M c n y	1080	0	M d n y	3240	0	M e n y	6480	0	M l n y	3240	0	M m n y	3240	0	M n n y	1620	12						
M a s s	180	0	M c s s	30	2	M d s s	90	0	M e s s	180	4	M l s s	90	0	M m s s	90	2	M n s s	90	2	M s s s	10	2			
M a s y	2160	0	M c s y	360	0	M d s y	1080	0	M e s y	2160	0	M l s y	1080	0	M m s y	1080	0	M n s y	1080	0	M s s y	180	4			
M a y y	6480	0	M c y y	1080	8	M d y y	3240	0	M e y y	6480	16	M l y y	3240	0	M m y y	3240	8	M n y y	3240	8	M s y y	1080	8	M y y y	2160	16

Table V: All Branched Inositol Tetramers, their Stereoisomer Numbers and Achiral meso-forms

Tetr				Iso	Ac	Tetr				Iso	Ac	Tetr				Iso	Ac	Tetr				Iso	Ac	Tetr				Iso	Ac	Tetr				Iso	Ac	Tetr				Iso	Ac	Tetr				Iso	Ac	Tetr				Iso	Ac
N	a	a	a	2160	0																																																
N	a	a	c	1080	6																																																
N	a	a	d	3240	0																																																
N	a	a	e	6480	12																																																
N	a	a	l	3240	0																																																
N	a	a	m	3240	6																																																
N	a	a	n	3240	6																																																
N	a	a	s	1080	6																																																
N	a	a	y	6480	12																																																
N	a	c	c	180	0	N	c	c	c	10	2																																										
N	a	c	d	1080	0	N	c	c	d	90	0																																										
N	a	c	e	2160	0	N	c	c	e	180	4																																										
N	a	c	l	1080	0	N	c	c	l	90	0																																										
N	a	c	m	1080	0	N	c	c	m	90	2																																										
N	a	c	n	1080	0	N	c	c	n	90	2																																										
N	a	c	s	360	0	N	c	c	s	30	2																																										
N	a	c	y	2160	0	N	c	c	y	180	4																																										
N	a	d	d	1620	0	N	c	d	d	270	0	N	d	d	d	270	0																																				
N	a	d	e	6480	0	N	c	d	e	1080	0	N	d	d	e	1620	0																																				
N	a	d	l	3240	0	N	c	d	l	540	6	N	d	d	l	810	0																																				
N	a	d	m	3240	0	N	c	d	m	540	0	N	d	d	m	810	0																																				
N	a	d	n	3240	0	N	c	d	n	540	0	N	d	d	n	810	0																																				
N	a	d	s	1080	0	N	c	d	s	180	0	N	d	d	s	270	0																																				
N	a	d	y	6480	0	N	c	d	y	1080	0	N	d	d	y	1620	0																																				
N	a	e	e	6480	0	N	c	e	e	1080	8	N	d	e	e	3240	0	N	e	e	e	2160	16																														
N	a	e	l	6480	0	N	c	e	l	1080	0	N	d	e	l	3240	12	N	e	e	l	3240	0																														
N	a	e	m	6480	0	N	c	e	m	1080	0	N	d	e	m	3240	0	N	e	e	m	3240	8																														
N	a	e	n	6480	0	N	c	e	n	1080	0	N	d	e	n	3240	0	N	e	e	n	3240	8																														
N	a	e	s	2160	0	N	c	e	s	360	0	N	d	e	s	1080	0	N	e	e	s	1080	8																														
N	a	e	y	12960	0	N	c	e	y	2160	0	N	d	e	y	6480	0	N	e	e	y	6480	16																														
N	a	l	l	1620	0	N	c	l	l	270	0	N	d	l	l	810	0	N	e	l	l	1620	0	N	l	l	l	270	0																								
N	a	l	m	3240	0	N	c	l	m	540	0	N	d	l	m	1620	6	N	e	l	m	3240	0	N	l	l	m	810	0																								
N	a	l	n	3240	0	N	c	l	n	540	0	N	d	l	n	1620	6	N	e	l	n	3240	0	N	l	l	n	810	0																								
N	a	l	s	1080	0	N	c	l	s	180	0	N	d	l	s	540	6	N	e	l	s	1080	0	N	l	l	s	270	0																								
N	a	l	y	6480	0	N	c	l	y	1080	0	N	d	l	y	3240	12	N	e	l	y	6480	0	N	l	l	y	1620	0																								
N	a	m	m	1620	0	N	c	m	m	270	6	N	d	m	m	810	0	N	e	m	m	1620	12	N	l	m	m	810	0	N	m	m	m	270	6																		
N	a	m	n	3240	0	N	c	m	n	540	0	N	d	m	n	1620	0	N	e	m	n	3240	0	N	l	m	n	1620	0	N	m	m	n	810	6																		
N	a	m	s	1080	0	N	c	m	s	180	0	N	d	m	s	540	0	N	e	m	s	1080	0	N	l	m	s	540	0	N	m	m	s	270	6																		
N	a	m	y	6480	0	N	c	m	y	1080	0	N	d	m	y	3240	0	N	e	m	y	6480	0	N	l	m	y	3240	0	N	m	m	y	1620	12																		
N	a	n	n	1620	0	N	c	n	n	270	6	N	d	n	n	810	0	N	e	n	n	1620	12	N	l	n	n	810	0	N	m	n	n	810	6	N	n	n	n	270	6												
N	a	n	s	1080	0	N	c	n	s	180	0	N	d	n	s	540	0	N	e	n	s	1080	0	N	l	n	s	540	0	N	m	n	s	540	0	N	n	n	s	270	6												
N	a	n	y	6480	0	N	c	n	y	1080	0	N	d	n	y	3240	0	N	e	n	y	6480	0	N	l	n	y	3240	0	N	m	n	y	3240	0	N	n	n	y	1620	12												
N	a	s	s	180	0	N	c	s	s	30	2	N	d	s	s	90	0	N	e	s	s	180	4	N	l	s	s	90	0	N	m	s	s	90	2	N	n	s	s	90	2	N	s	s	s	10	2						
N	a	s	y	2160	0	N	c	s	y	360	0	N	d	s	y	1080	0	N	e	s	y	2160	0	N	l	s	y	1080	0	N	m	s	y	1080	0	N	n	s	y	1080	0	N	s	s	y	180	4						
N	a	y	y	6480	0	N	c	y	y	1080	8	N	d	y	y	3240	0	N	e	y	y	6480	16	N	l	y	y	3240	0	N	m	y	y	3240	8	N	n	y	y	3240	8	N	s	y	y	1080	8	N	y	y	y	2160	16

N

Table V: All Branched Inositol Tetramers, their Stereoisomer Numbers and Achiral meso-forms

Tetr				Iso	Ac	Tetr				Iso	Ac	Tetr				Iso	Ac	Tetr				Iso	Ac	Tetr				Iso	Ac	Tetr				Iso	Ac	Tetr				Iso	Ac	Tetr				Iso	Ac	Tetr				Iso	Ac
S	a	a	a	724	0																																																
S	a	a	c	360	6																																																
S	a	a	d	1080	0																																																
S	a	a	e	2160	12																																																
S	a	a	l	1080	0																																																
S	a	a	m	1080	6																																																
S	a	a	n	1080	6																																																
S	a	a	s	360	6																																																
S	a	a	y	2160	12																																																
S	a	c	c	60	0	S	c	c	c	4	2																																								
S	a	c	d	360	0	S	c	c	d	30	0																																								
S	a	c	e	720	0	S	c	c	e	60	4																																								
S	a	c	l	360	0	S	c	c	l	30	0																																								
S	a	c	m	360	0	S	c	c	m	30	2																																								
S	a	c	n	360	0	S	c	c	n	30	2																																								
S	a	c	s	120	0	S	c	c	s	10	2																																								
S	a	c	y	720	0	S	c	c	y	60	4																																								
S	a	d	d	540	0	S	c	d	d	90	0	S	d	d	d	92	0																																		
S	a	d	e	2160	0	S	c	d	e	360	0	S	d	d	e	540	0																																		
S	a	d	l	1080	0	S	c	d	l	180	6	S	d	d	l	270	0																																		
S	a	d	m	1080	0	S	c	d	m	180	0	S	d	d	m	270	0																																		
S	a	d	n	1080	0	S	c	d	n	180	0	S	d	d	n	270	0																																		
S	a	d	s	360	0	S	c	d	s	60	0	S	d	d	s	90	0																																		
S	a	d	y	2160	0	S	c	d	y	360	0	S	d	d	y	540	0																																		
S	a	e	e	2160	0	S	c	e	e	360	8	S	d	e	e	1080	0	S	e	e	e	724	16																												
S	a	e	l	2160	0	S	c	e	l	360	0	S	d	e	l	1080	12	S	e	e	l	1080	0																												
S	a	e	m	2160	0	S	c	e	m	360	0	S	d	e	m	1080	0	S	e	e	m	1080	8																												
S	a	e	n	2160	0	S	c	e	n	360	0	S	d	e	n	1080	0	S	e	e	n	1080	8																												
S	a	e	s	720	0	S	c	e	s	120	0	S	d	e	s	360	0	S	e	e	s	360	8																												
S	a	e	y	4320	0	S	c	e	y	720	0	S	d	e	y	2160	0	S	e	e	y	2160	16																												
S	a	l	l	540	0	S	c	l	l	90	0	S	d	l	l	270	0	S	e	l	l	540	0	S	l	l	l	92	0																								
S	a	l	m	1080	0	S	c	l	m	180	0	S	d	l	m	540	6	S	e	l	m	1080	0	S	l	l	m	270	0																								
S	a	l	n	1080	0	S	c	l	n	180	0	S	d	l	n	540	6	S	e	l	n	1080	0	S	l	l	n	270	0																								
S	a	l	s	360	0	S	c	l	s	60	0	S	d	l	s	180	6	S	e	l	s	360	0	S	l	l	s	90	0																								
S	a	l	y	2160	0	S	c	l	y	360	0	S	d	l	y	1080	12	S	e	l	y	2160	0	S	l	l	y	540	0																								
S	a	m	m	540	0	S	c	m	m	90	6	S	d	m	m	270	0	S	e	m	m	540	12	S	l	m	m	270	0	S	m	m	m	92	6																		
S	a	m	n	1080	0	S	c	m	n	180	0	S	d	m	n	540	0	S	e	m	n	1080	0	S	l	m	n	540	0	S	m	m	n	270	6																		
S	a	m	s	360	0	S	c	m	s	60	0	S	d	m	s	180	0	S	e	m	s	360	0	S	l	m	s	180	0	S	m	m	s	90	6																		
S	a	m	y	2160	0	S	c	m	y	360	0	S	d	m	y	1080	0	S	e	m	y	2160	0	S	l	m	y	1080	0	S	m	m	y	540	12																		
S	a	n	n	540	0	S	c	n	n	90	6	S	d	n	n	270	0	S	e	n	n	540	12	S	l	n	n	270	0	S	m	n	n	270	6	S	n	n	n	92	6												
S	a	n	s	360	0	S	c	n	s	60	0	S	d	n	s	180	0	S	e	n	s	360	0	S	l	n	s	180	0	S	m	n	s	180	0	S	n	n	s	90	6												
S	a	n	y	2160	0	S	c	n	y	360	0	S	d	n	y	1080	0	S	e	n	y	2160	0	S	l	n	y	1080	0	S	m	n	y	1080	0	S	n	n	y	540	12												
S	a	s	s	60	0	S	c	s	s	10	2	S	d	s	s	30	0	S	e	s	s	60	4	S	l	s	s	30	0	S	m	s	s	30	2	S	n	s	s	30	2	S	s	s	s	4	2						
S	a	s	y	720	0	S	c	s	y	120	0	S	d	s	y	360	0	S	e	s	y	720	0	S	l	s	y	360	0	S	m	s	y	360	0	S	n	s	y	360	0	S	s	s	y	60	4						
S	a	y	y	2160	0	S	c	y	y	360	8	S	d	y	y	1080	0	S	e	y	y	2160	16	S	l	y	y	1080	0	S	m	y	y	1080	8	S	n	y	y	1080	8	S	s	y	y	360	8	S	y	y	y	724	16

Table V: All Branched Inositol Tetramers, their Stereoisomer Numbers and Achiral meso-forms

Tetr				Iso	Ac	Tetr				Iso	Ac	Tetr				Iso	Ac	Tetr				Iso	Ac	Tetr				Iso	Ac	Tetr				Iso	Ac	Tetr				Iso	Ac	Tetr				Iso	Ac	Tetr				Iso	Ac
Y	a	a	a	4320	0																																																
Y	a	a	c	2160	12																																																
Y	a	a	d	6480	0																																																
Y	a	a	e	12960	24																																																
Y	a	a	l	6480	0																																																
Y	a	a	m	6480	12																																																
Y	a	a	n	6480	12																																																
Y	a	a	s	2160	12																																																
Y	a	a	y	12960	24																																					Y											
Y	a	c	c	360	0	Y	c	c	c	20	4																																										
Y	a	c	d	2160	0	Y	c	c	d	180	0																																										
Y	a	c	e	4320	0	Y	c	c	e	360	8																																										
Y	a	c	l	2160	0	Y	c	c	l	180	0																																										
Y	a	c	m	2160	0	Y	c	c	m	180	4																																										
Y	a	c	n	2160	0	Y	c	c	n	180	4																																										
Y	a	c	s	720	0	Y	c	c	s	60	4																																										
Y	a	c	y	4320	0	Y	c	c	y	360	8																																										
Y	a	d	d	3240	0	Y	c	d	d	540	0	Y	d	d	d	540	0																																				
Y	a	d	e	12960	0	Y	c	d	e	2160	0	Y	d	d	e	3240	0																																				
Y	a	d	l	6480	0	Y	c	d	l	1080	12	Y	d	d	l	1620	0																																				
Y	a	d	m	6480	0	Y	c	d	m	1080	0	Y	d	d	m	1620	0																																				
Y	a	d	n	6480	0	Y	c	d	n	1080	0	Y	d	d	n	1620	0																																				
Y	a	d	s	2160	0	Y	c	d	s	360	0	Y	d	d	s	540	0																																				
Y	a	d	y	12960	0	Y	c	d	y	2160	0	Y	d	d	y	3240	0																																				
Y	a	e	e	12960	0	Y	c	e	e	2160	16	Y	d	e	e	6480	0	Y	e	e	e	4320	32																														
Y	a	e	l	12960	0	Y	c	e	l	2160	0	Y	d	e	l	6480	24	Y	e	e	l	6480	0																														
Y	a	e	m	12960	0	Y	c	e	m	2160	0	Y	d	e	m	6480	0	Y	e	e	m	6480	16																														
Y	a	e	n	12960	0	Y	c	e	n	2160	0	Y	d	e	n	6480	0	Y	e	e	n	6480	16																														
Y	a	e	s	4320	0	Y	c	e	s	720	0	Y	d	e	s	2160	0	Y	e	e	s	2160	16																														
Y	a	e	y	25920	0	Y	c	e	y	4320	0	Y	d	e	y	12960	0	Y	e	e	y	12960	32																														
Y	a	l	l	3240	0	Y	c	l	l	540	0	Y	d	l	l	1620	0	Y	e	l	l	3240	0	Y	l	l	l	540	0																								
Y	a	l	m	6480	0	Y	c	l	m	1080	0	Y	d	l	m	3240	12	Y	e	l	m	6480	0	Y	l	l	m	1620	0																								
Y	a	l	n	6480	0	Y	c	l	n	1080	0	Y	d	l	n	3240	12	Y	e	l	n	6480	0	Y	l	l	n	1620	0																								
Y	a	l	s	2160	0	Y	c	l	s	360	0	Y	d	l	s	1080	12	Y	e	l	s	2160	0	Y	l	l	s	540	0																								
Y	a	l	y	12960	0	Y	c	l	y	2160	0	Y	d	l	y	6480	24	Y	e	l	y	12960	0	Y	l	l	y	3240	0																								
Y	a	m	m	3240	0	Y	c	m	m	540	12	Y	d	m	m	1620	0	Y	e	m	m	3240	24	Y	l	m	m	1620	0	Y	m	m	m	540	12																		
Y	a	m	n	6480	0	Y	c	m	n	1080	0	Y	d	m	n	3240	0	Y	e	m	n	6480	0	Y	l	m	n	3240	0	Y	m	m	n	1620	12																		
Y	a	m	s	2160	0	Y	c	m	s	360	0	Y	d	m	s	1080	0	Y	e	m	s	2160	0	Y	l	m	s	1080	0	Y	m	m	s	540	12																		
Y	a	m	y	12960	0	Y	c	m	y	2160	0	Y	d	m	y	6480	0	Y	e	m	y	12960	0	Y	l	m	y	6480	0	Y	m	m	y	3240	24																		
Y	a	n	n	3240	0	Y	c	n	n	540	12	Y	d	n	n	1620	0	Y	e	n	n	3240	24	Y	l	n	n	1620	0	Y	m	n	n	1620	12	Y	n	n	n	540	12												
Y	a	n	s	2160	0	Y	c	n	s	360	0	Y	d	n	s	1080	0	Y	e	n	s	2160	0	Y	l	n	s	1080	0	Y	m	n	s	1080	0	Y	n	n	s	540	12												
Y	a	n	y	12960	0	Y	c	n	y	2160	0	Y	d	n	y	6480	0	Y	e	n	y	12960	0	Y	l	n	y	6480	0	Y	m	n	y	6480	0	Y	n	n	y	3240	24												
Y	a	s	s	360	0	Y	c	s	s	60	4	Y	d	s	s	180	0	Y	e	s	s	360	8	Y	l	s	s	180	0	Y	m	s	s	180	4	Y	n	s	s	180	4	Y	s	s	s	20	4						
Y	a	s	y	4320	0	Y	c	s	y	720	0	Y	d	s	y	2160	0	Y	e	s	y	4320	0	Y	l	s	y	2160	0	Y	m	s	y	2160	0	Y	n	s	y	2160	0	Y	s	s	y	360	8						
Y	a	y	y	12960	0	Y	c	y	y	2160	16	Y	d	y	y	6480	0	Y	e	y	y	12960	32	Y	l	y	y	6480	0	Y	m	y	y	6480	16	Y	n	y	y	6480	16	Y	s	y	y	2160	16	Y	y	y	y	4320	32

Table V: All Branched Inositol Tetramers, their Stereoisomer Numbers and Achiral meso-forms

Higher Linear Oligomers:

From ISOMERS[2] we can derive the number of isomers for higher linear oligomers in the form of a model: Take a chain with 9 differently colored beads. Then the following number of possible arrangements are summarized in *Table VII*: Case (a) lists the possible combinations with all 9 beads of different color, case (b) allows for all possible combinations including multiple occurrences of each colored bead.

Linear Oligomer	*General Isomers (a)*	*General Isomers (b)*
Dimer	36	45
Trimer	252	405
Tetramer	1,512	3,321
Pentamer	7,560	29,889
Hexamer	30,240	266,085
Heptamer	90,720	2,394,765
Octamer	181,440	21,526,641
Nonamer	181,440	193,739,769

Table VII: Numbers of General Oligomers with 9 Elements

Now we replace the colored beads by the nine different inositols with their multifunctional binding possibilities outlined in *Table I*. As can be seen from this table, the relation of monopositions (*mono*) to asymmetrical disubstitutions (*di-as*) for all inositols is always 1 : 5. We use the asymmetrical disubstitutional possibilities, since regardless of the oligomer, the inner inositols are all substituted in this way, because we use different inositols to fill the patterns. Again from *Table I* we can gather, that the 9 inositols can be classified according to their *mono-* and *di-as*-possibilities (in round brackets) into three principle groups [in square brackets]: ***cis*** and ***scyllo*** (1 / 5) [X]; **D**-*chiro*, **L**-*chiro*, ***muco*** and ***neo*** (3 / 15) [Y] and ***allo***, ***epi*** and ***myo*** (6 / 30) [Z]. Within the following compilation (*Table VIII*) we will use these abbreviations (X, Y and Z) and their **count** of members within the group (2, 4 and 3) to derive the **count** of all possible patterns. Let us take e.g. pattern XYZZZ of the pentamers: The count for this specific pattern can be derived by the product of the individual counts: count of X(= 2) times count of Y(= 4) times count of ZZZ(= 1) equals 8. A general formula for this would be (n_X, n_Y and n_Z being the respective numbers of the three types of inositols):

$$\text{Pattern\_count}(n_X, n_Y, n_Z) = \binom{2}{n_X}\binom{4}{n_Y}\binom{3}{n_Z}.$$

The figure given under **isomers/count** is then derived by a simple product of all *di-as* – possibilities divided by 25 for the two outer inositols, because their *mono*-possibilities are 5 times less each: X(=5) * Y(=15) * Z(=30) * Z(=30) * Z(=30) / 25 = 81,000. In a general way this would amount to: Isomers/count = $5^{n_X} * 15^{n_Y} * 30^{n_Z} / 25$. The product of **count** times **isomers/count** (given in the column "**product**") thus represents the amount of individual patterns with the respective inositols filled into the general patterns. The sum of these products for each oligomer then has to be multiplied by the possible combinations to yield the final number of inositol stereoisomers for each oligomer given under "**TOTAL**". The figure given under **combinations** represents the number of combinations of *n* different elements within a "*n*-mer" (e.g. n = five for a pentamer results in 60 combinations). In general terms this is exactly n! / 2. The factor 1 / 2 stems from the twofold symmetry of such linear oligomers. The product of the sum of counts for the general isomers times the combinations thus represents the figures given in *Table VII* for the general isomers (a) thereof (e.g. 84 * 3 = 252 for trimers). In the way outlined above the following *Table VIII* has been derived, from which the summary in the subsequent *Table IX* has been extracted.

general

inositol	type (mono / di-as)	count		type	count	type	count	type	count
c, s	X (1 / 5)	2		XX	1	YY	6	YYY	4
d, l, m, n	Y (3 / 15)	4		XY	8	YZ	12	ZZZ	1
a, e, y	Z (6 / 30)	3		XZ	6	ZZ	3	YYYY	1
	sum	9							

linear dimers (AB)

	pattern	count	isomers/count	product	combinations	TOTAL
	XX	1	1	1		
	XY	8	3	24		
	XZ	6	6	36		
	YY	6	9	54		
	YZ	12	18	216		
	ZZ	3	36	108		
gen. isomers	sum	36		439	1	439

linear trimers (ABC)

	pattern	count	isomers/count	product	combinations	TOTAL
	XXY	4	15	60		
	XXZ	3	30	90		
	XYY	12	45	540		
	XYZ	24	90	2,160		
	XZZ	6	180	1,080		
	YYY	4	135	540		
	YYZ	18	270	4,860		
	YZZ	12	540	6,480		
	ZZZ	1	1,080	1,080		
gen. isomers	sum	84		16,890	3	50,670

linear tetramers (ABCD)

	pattern	count	isomers/count	product	combinations	TOTAL
	XXYY	6	225	1,350		
	XXYZ	12	450	5,400		
	XXZZ	3	900	2,700		
	XYYY	8	675	5,400		
	XYYZ	36	1,350	48,600		
	XYZZ	24	2,700	64,800		
	XZZZ	2	5,400	10,800		
	YYYY	1	2,025	2,025		
	YYYZ	12	4,050	48,600		
	YYZZ	18	8,100	145,800		
	YZZZ	4	16,200	64,800		
gen. isomers	sum	126		400,275	12	4,803,300

linear pentamers (ABCDE)

	pattern	count	isomers/count	product	combinations	TOTAL
	XXYYY	4	3,375	13,500		
	XXYYZ	18	6,750	121,500		
	XXYZZ	12	13,500	162,000		
	XXZZZ	1	27,000	27,000		
	XYYYY	2	10,125	20,250		
	XYYYZ	24	20,250	486,000		
	XYYZZ	36	40,500	1,458,000		
	XYZZZ	8	81,000	648,000		
	YYYYZ	3	60,750	182,250		
	YYYZZ	12	121,500	1,458,000		
	YYZZZ	6	243,000	1,458,000		
gen. isomers	sum	126		6,034,500	60	362,070,000

linear hexamers (ABCDEF)

	pattern	count	isomers/count	product	combinations	TOTAL
	XXYYYY	1	50,625	50,625		
	XXYYYZ	12	101,250	1,215,000		
	XXYYZZ	18	202,500	3,645,000		
	XXYZZZ	4	405,000	1,620,000		
	XYYYYZ	6	303,750	1,822,500		
	XYYYZZ	24	607,500	14,580,000		
	XYYZZZ	12	1,215,000	14,580,000		
	YYYYZZ	3	1,822,500	5,467,500		
	YYYZZZ	4	3,645,000	14,580,000		
gen. isomers	sum	84		57,560,625	360	20,721,825,000

linear heptamers (ABCDEFG)

	pattern	count	isomers/count	product	combinations	TOTAL
	XXYYYYZ	3	1,518,750	4,556,250		
	XXYYYZZ	12	3,037,500	36,450,000		
	XXYYZZZ	6	6,075,000	36,450,000		
	XYYYYZZ	6	9,112,500	54,675,000		
	XYYYZZZ	8	18,225,000	145,800,000		
	YYYYZZZ	1	54,675,000	54,675,000		
gen. isomers	sum	36		332,606,250	2,520	838,167,750,000

linear octamers (ABCDEFGH)

	pattern	count	isomers/count	product	combinations	TOTAL
	XXYYYYZZ	3	45,562,500	136,687,500		
	XXYYYZZZ	4	91,125,000	364,500,000		
	XYYYYZZZ	2	273,375,000	546,750,000		
gen. isomers	sum	9		1,047,937,500	20,160	21,126,420,000,000

linear nonamers (ABCDEFGHI)

	pattern	count	isomers/count	product	combinations	TOTAL
	XXYYYYZZZ	1	1,366,875,000	1,366,875,000		
gen. isomers	sum	1		1,366,875,000	181,440	248,005,800,000,000

Table VIII: Calculation of Higher Oligomers and their Inositol Isomer Numbers

Linear Oligomer	*Inositol Stereoisomers (a)*	*Inositol Stereoisomers (b)*
Dimer	439	528
Trimer	50,670	82,176
Tetramer	4,803,300	13,109,760
Pentamer	362,070,000	§
Hexamer	20,721,825,000	§
Heptamer	838,167,750,000	§
Octamer	21,126,420,000,000	§
Nonamer	248,005,800,000,000	§

Table IX: Summary of Numbers of Oligomers including Stereoisomers with all nine Inositols

Within *Table IX*, (a) and (b) have the same meaning as in *Table VII*: Column (a) lists the total number of stereoisomers for the case of all nine inositols within the oligomer being different (taken from *Table VIII*), while column (b) lists the figures for all combinations including multiple occurrence as far as calculated in this paper. The estimation of patterns and numbers for inositol oligomers (b) higher than tetramers (§) lies well beyond our present computational possibilities.

Summary and Conclusion

With these comprehensive tables we hope to have contributed concrete help to all chemists looking for numbers of inositol oligomers including all stereoisomers of a general or a specific form. The generation of the achiral *meso* forms thereof via an automated way is still a theoretical as well as practical task well ahead.

References and Notes

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The MATHEMATICA - AddOn "Isomers.m" together with some help browser files is available free of charge (for academics only) by registration at the bottom of the web-page: http://www.cis.TUGraz.at/orgc/institut/softnew.htm