



**2017/18 PRODUCT CATALOGUE**  
**SACCHAROMYCES CEREVISIAE AMINO ACID**  
**DROP-OUT SUPPLEMENTS**

 **FORMEDIUM**  
CREATING THE CULTURE FOR DISCOVERY™

# CONTENTS

3	<b>Complete Supplement Mixture, (CSM)</b>	11	<b>Kaiser Mixture, Synthetic</b>
3	Complete CSM Mixture		<b>Complete Drop-Out Mixture, (SC)</b>
4	Complete CSM Mixture	11	Complete SC Mixture
4	CSM single Drop-out	12	Complete SC Mixture
5	CSM Double Drop-out	12	SC Single Drop-outs
6	CSM Triple Drop-out	12	SC Double Drop-outs
7	CSM Quadruple Drop-out	12	SC Triple Drop-outs
8	CSM Multiple Drop-out	12	SC Quadruple Drop-outs
9	<b>Hopkins Mixture, Synthetic</b>	12	SC Multiple Drop-outs
	<b>Complete Supplement Mixture, (SCSM)</b>	13	<b>Brent Supplement Mixture, (BSM)</b>
9	Complete SCSM Mixture	13	Complete BSM Mixture
10	SCSM single Drop-outs	14	BSM Single Drop-Outs
10	SCSM Triple Drop-outs	14	BSM Multiple Drop-Outs
10	SCSM Multiple Drop-outs	14	BSM Double Drop-outs
10	SCSM Double Drop-outs		
10	SCSM Quadruple Drop-outs	15	<b>Hollenberg Supplement Mixture, (HSM)</b>
		15	Complete HSM Mixture
		16	HSM Single Drop-Outs
		16	HSM Triple Drop-Outs
		16	HSM Double Drop-outs
		16	HSM Multiple Drop-Outs

## SACCHAROMYCES CEREVISIAE AMINO ACID DROP-OUT SUPPLEMENTS

Drop-Out supplements are based upon a standard mixture of Amino acids, Vitamins and other components used to supplement encountered auxothropies. In each of the Drop-Out mixtures as provided by Formedium™ every component is provided except one or more supplements of interest, i.e. the “dropped out” supplements.

Formedium™ is producing five different groups of Drop-Out supplements based on five basic amino acid

mixtures as described by different authors. Each basic mixture supports optimal growth of yeast, but lacks one or more essential nutrients, useful to select for auxotrophic requirements and transformants.

For more detailed information about all different Drop-Out formulations derived from each basic amino acid supplement mixture, please choose from the categories displayed below.

# COMPLETE SUPPLEMENT MIXTURE, (CSM)

## Saccharomyces Cerevisiae Drop-Out Supplements

### Complete Supplement Mixture (CSM)

Complete Supplement Mixture (CSM) is a combination of Amino Acids, Vitamins and other essential components to support a vigorous growth of cells in CSM supplemented medium. Yeast Nitrogen Base media without Amino Acids supplemented with CSM have been proven to be an excellent combination for the cultivation of almost all strains of Saccharomyces Cerevisiae and to supplement encountered auxotrophies.

CSM is also a basis for many “Drop-Out” mixtures to select for auxotrophic requirements and transformants. Each CSM Drop-Out mixture contain all components except for one to five essential nutrients, i.e. the “dropped out” supplements. Some CSM Drop-Out mixtures are also available with additions of extra Amino Acids and other components.

Complete Supplement Mixture formulations are available in 10 gram and 100 gram pack sizes. If you would like to order, or get a quote, on a larger pack size, please contact us. Please enquire about custom made formulations.

## COMPLETE CSM MIXTURE

### Size

10g  
100g

Formula	mg/l
Adenine	10
L-Arginine	50
L-Aspartic acid	80
L-Histidine HCl	20
L-Isoleucine	50
L-Leucine	100
L-Lysine HCl	50
L-Methionine	20
L-Phenylalanine	50
L-Threonine	100
L-Tryptophan	50
L-Tyrosine	50
Uracil	20
Valine	140
Total	790



GHS07 Skin & Eye Irritation

## COMPLETE CSM MIXTURE

Formulation	mg/l	10g	100g
CSM	790	DCS0011	DCS0019
CSM, + 20 Ade	800	DCS0021	DCS0029
CSM, + 40 Ade	820	DCS0031	DCS0039

## CSM SINGLE DROP-OUT

Formulation	mg/l	10g	100g
CSM, -Ade	780	DCS0041	DCS0049
CSM, -Arg	740	DCS0051	DCS0059
CSM, -Asp	710	DCS0061	DCS0069
CSM, -His	770	DCS0071	DCS0079
CSM, -Iso	740	DCS0081	DCS0089
CSM, -Leu	690	DCS0091	DCS0099
CSM, -Lys	740	DCS0101	DCS0109
CSM, -Met	770	DCS0111	DCS0119
CSM, -Phe	740	DCS0121	DCS0129
CSM, -Thr	690	DCS0131	DCS0139
CSM, -Trp	740	DCS0141	DCS0149
CSM, -Tyr	740	DCS0151	DCS0159
CSM, -Ura	770	DCS0161	DCS0169
CSM, -Val	650	DCS0171	DCS0179
CSM, -Arg, + 40 Ade	770	DCS0181	DCS0189
CSM, -His, + 20 Ade	780	DCS0191	DCS0199
CSM, -His, + 40 Ade	800	DCS0201	DCS0209

Formulation	mg/l	10g	100g
CSM, -Leu, + 5 Ade	695	DCS0211	DCS0219
CSM, -Leu, + 20 Ade	700	DCS0221	DCS0229
CSM, -Leu, + 40 Ade	720	DCS0231	DCS0239
CSM, -Lys, + 40 Ade	770	DCS0241	DCS0249
CSM, -Trp, + 5 Ade	735	DCS0251	DCS0259
CSM, -Trp, + 20 Ade	750	DCS0261	DCS0269
CSM, -Ura, + 20 Ade	780	DCS0271	DCS0279
CSM, -Ura, + 40 Ade	800	DCS0281	DCS0289
CSM, -Trp, + 10 Ala	750	DCS0291	DCS0299
CSM, -Trp, + 25 Ala	765	DCS0301	DCS0309
CSM, -Trp, + 50 Ala	790	DCS0311	DCS0319
CSM, -His, + 10 Ala	780	DCS0321	DCS0329
CSM, -His, + 25 Ala	795	DCS0331	DCS0339
CSM, -His, + 50 Ala	820	DCS0341	DCS0349

## CSM DOUBLE DROP-OUT

Formulation	mg/l	10g	100g
CSM, -Ade, -Arg	730	DCS0351	DCS0359
CSM, -Ade, -His	760	DCS0361	DCS0369
CSM, -Ade, -Leu	680	DCS0371	DCS0379
CSM, -Ade, -Lys	730	DCS0381	DCS0389
CSM, -Ade, -Met	760	DCS0391	DCS0399
CSM, -Ade, -Trp	730	DCS0401	DCS0409
CSM, -Ade, Ura	760	DCS0411	DCS0419
CSM, -Arg, -His	720	DCS0421	DCS0429
CSM, -Arg, -Leu	640	DCS0431	DCS0439
CSM, -Arg, -Trp	690	DCS0441	DCS0449
CSM, -Arg, -Ura	720	DCS0451	DCS0459
CSM, -His, -Leu	670	DCS0461	DCS0469
CSM, -His, -Lys	720	DCS0471	DCS0479
CSM, -His, -Met	750	DCS0481	DCS0489
CSM, -His, -Thr	670	DCS0491	DCS0499
CSM, -His, -Trp	720	DCS0501	DCS0509
CSM, -His, -Tyr	720	DCS0511	DCS0519
CSM, -His, -Ura	750	DCS0521	DCS0529
CSM, -Leu, -Lys	640	DCS0531	DCS0539
CSM, -Leu, -Met	670	DCS0541	DCS0549
CSM, -Leu, -Thr	590	DCS0551	DCS0559
CSM, -Leu, -Trp	640	DCS0561	DCS0569
CSM, -Leu, -Tyr	640	DCS0571	DCS0579
CSM, -Leu, -Ura	670	DCS0581	DCS0589
CSM, -Lys, -Met	720	DCS0591	DCS0599
CSM, -Lys, -Thr	640	DCS0601	DCS0609
CSM, -Lys, -Trp	690	DCS0611	DCS0619
CSM, -Lys, -Tyr	690	DCS0621	DCS0629
CSM, -Lys, -Ura	720	DCS0631	DCS0639
CSM, -Met, -Trp	720	DCS0641	DCS0649

Formulation	mg/l	10g	100g
CSM, -Met, -Ura	750	DCS0651	DCS0659
CSM, -Thr, Trp	640	DCS0661	DCS0669
CSM, -Thr, -Ura	670	DCS0671	DCS0679
CSM, -Trp, -Tyr	690	DCS0681	DCS0689
CSM, -Trp, -Ura	720	DCS0691	DCS0699
CSM, -Tyr, -Ura	720	DCS0701	DCS0709
CSM, -His, -Leu, + 20 Ade	680	DCS0711	DCS0719
CSM, -His, -Leu, + 40 Ade	700	DCS0721	DCS0729
CSM, -His, -Trp, + 20 Ade	730	DCS0731	DCS0739
CSM, -His, -Trp, + 40 Ade	750	DCS0741	DCS0749
CSM, -His, -Ura, + 40 Ade	780	DCS0751	DCS0759
CSM, -Leu, -Met, + 40 Ade	700	DCS0761	DCS0769
CSM, -Leu, -Trp, + 20 Ade	650	DCS0771	DCS0779
CSM, -Leu, -Trp, + 40 Ade	670	DCS0781	DCS0789
CSM, -Leu, -Ura, + 40 Ade	700	DCS0791	DCS0799
CSM, -Trp, -Ura, + 40 Ade	750	DCS0801	DCS0809
CSM, -Leu, -Ura, + 30 Ser	700	DCS0811	DCS0819

## CSM TRIPLE DROP-OUT

Formulation	mg/l	10g	100g
CSM, -Ade, -Arg, -Lys	680	DCS0821	DCS0829
CSM, -Ade, -His, -Leu	660	DCS0831	DCS0839
CSM, -Ade, -His, -Trp	710	DCS0841	DCS0849
CSM, -Ade, -His, -Ura	740	DCS0851	DCS0859
CSM, -Ade, -Leu, -Met	660	DCS0861	DCS0869
CSM, -Ade, -Leu, -Trp	630	DCS0871	DCS0879
CSM, -Ade, -Leu, -Ura	660	DCS0881	DCS0889
CSM, -Ade, -Met, -Trp	710	DCS0891	DCS0899
CSM, -Ade, -Met, -Ura	740	DCS0901	DCS0909
CSM, -Ade, -Trp, -Ura	710	DCS0911	DCS0919
CSM, -Arg, -His, -Lys	670	DCS0921	DCS0929
CSM, -Arg, -His, -Ura	700	DCS0931	DCS0939
CSM, -Arg, -Leu, -Ura	620	DCS0941	DCS0949
CSM, -Arg, -Trp, -Ura	670	DCS0951	DCS0959
CSM, -His, -Leu, -Lys	620	DCS0961	DCS0969
CSM, -His, -Leu, -Trp	620	DCS0971	DCS0979
CSM, -His, -Leu, -Met	650	DCS0981	DCS0989
CSM, -His, -Leu, -Ura	650	DCS0991	DCS0999
CSM, -His, -Lys, -Trp	670	DCS1001	DCS1009
CSM, -His, -Lys, -Ura	700	DCS1011	DCS1019
CSM, -His, -Met, -Trp	700	DCS1021	DCS1029
CSM, -His, -Met, -Ura	730	DCS1031	DCS1039
CSM, -His, -Trp, -Val	580	DCS1041	DCS1049

Formulation	mg/l	10g	100g
CSM, -His, -Trp, -Ura	700	DCS1051	DCS1059
CSM, -Leu, -Lys, Trp	590	DCS1061	DCS1069
CSM, -Leu, -Lys, Ura	620	DCS1071	DCS1079
CSM, -Leu, -Met, -Trp	620	DCS1081	DCS1089
CSM, -Leu, -Met, -Ura	650	DCS1091	DCS1099
CSM, -Leu, -Trp, -Ura	620	DCS1101	DCS1109
CSM, -Lys, -Trp, -Ura	670	DCS1111	DCS1119
CSM, -Lys, -Tyr, -Ura	670	DCS1121	DCS1129
CSM, -Met, -Trp, -Ura	700	DCS1131	DCS1139
CSM, -Phe, -Trp, -Tyr	640	DCS1141	DCS1149
CSM, -His, -Leu, -Trp, + 20 Ade	630	DCS1151	DCS1159
CSM, -His, -Leu, -Trp, + 40 Ade	650	DCS1161	DCS1169
CSM, -His, -Leu, -Ura, + 20 Ser, + 20 Pro, + 20 Cys	710	DCS1171	DCS1179
CSM, -His, -Leu, -Trp, + 20 Ser, + 20 Pro, + 20 Cys	680	DCS1181	DCS1189

## CSM QUADRUPLE DROP-OUT

Formulation	mg/l	10g	100g
CSM, -Ade, -Arg, -Leu, -Ura	610	DCS1191	DCS1199
CSM, -Ade, -Arg, -Met, -Tyr	660	DCS1201	DCS1209
CSM, -Ade, -His, -Leu, -Lys	610	DCS1211	DCS1219
CSM, -Ade, -His, -Leu, -Trp	610	DCS1221	DCS1229
CSM, -Ade, -His, -Leu, -Ura	640	DCS1231	DCS1239
CSM, -Ade, -His, -Met, -Ura	690	DCS1241	DCS1249
CSM, -Ade, -His, -Trp, -Ura	690	DCS1251	DCS1259
CSM, -Ade, -Leu, -Lys, -Trp	580	DCS1261	DCS1269
CSM, -Ade, -Leu, -Met, -Ura	640	DCS1271	DCS1279
CSM, -Ade, -Leu, -Trp, -Ura	610	DCS1281	DCS1289
CSM, -Ade, -Met, -Trp, -Ura	690	DCS1291	DCS1299
CSM, -Arg, -His, -Lys, -Ura	650	DCS1301	DCS1309
CSM, -Arg, -Leu, -Lys, -Ura	570	DCS1311	DCS1319
CSM, -Arg, -Leu, -Trp, -Ura	570	DCS1321	DCS1329

Formulation	mg/l	10g	100g
CSM, -Arg, -Lys, -Trp, -Ura	620	DCS1331	DCS1339
CSM, -Asp, -His, -Leu, -Trp	540	DCS1341	DCS1349
CSM, -His, -Leu, -Lys, -Trp	570	DCS1351	DCS1359
CSM, -His, -Leu, -Met, -Trp	600	DCS1361	DCS1369
CSM, -His, -Leu, -Lys, -Ura	600	DCS1371	DCS1379
CSM, -His, -Leu, -Trp, -Ura	600	DCS1381	DCS1389
CSM, -His, -Lys, -Trp, -Ura	650	DCS1391	DCS1399
CSM, -His, -Met, -Trp, -Ura	680	DCS1401	DCS1409
CSM, -Leu, -Lys, -Trp, -Ura	570	DCS1411	DCS1419
CSM, -Leu, -Met, -Trp, -Ura	600	DCS1421	DCS1429
CSM, -Arg, -His, -Leu, -Trp, + 20 Cys, + 20 Pro, + 20 Ser, + 20 Ura	650	DCS1431	DCS1439
CSM, -His, -Leu, -Trp, -Ura, + 20 Cys, + 20 Pro, + 20 Ser	660	DCS1441	DCS1449

## CSM MULTIPLE DROP-OUT

Formulation	mg/l	10g	100g
CSM, -Ade, -Arg, -His, -Leu, -Met, -Thr, -Trp, -Ura	420	DCS1451	DCS1459
CSM, -Arg, Asp, -Ile, -Met, -Phe, -Thr, -Tyr, -Ura, -Val	230	DCS1461	DCS1469
CSM, -Ade, -His, -Leu, -Lys, -Met, -Thr, -Trp, -Tyr, -Ura	370	DCS1471	DCS1479
CSM, -Ade, -His, -Leu, -Lys, -Trp, -Tyr, -Ura	490	DCS1481	DCS1489
CSM, -Ade, -His, -Leu, -Lys, -Trp, -Ura	540	DCS1491	DCS1499
CSM, -Ade, -His, -Leu, -Met, -Trp	590	DCS1501	DCS1509
CSM, -Ade, -His, -Leu, -Met, -Trp, -Ura	570	DCS1511	DCS1519
CSM, -Ade, -His, -Leu, -Trp, -Ura	590	DCS1521	DCS1529
CSM, -Ade, -His, -Lys, -Trp, -Ura	640	DCS1531	DCS1539
CSM, -Ade, -Leu, -Lys, -Met, -Trp, -Ura	540	DCS1541	DCS1549
CSM, -Arg, -His, -Lys, -Trp, -Ura	600	DCS1551	DCS1559
CSM, -His, -Leu, -Lys, -Met, -Thr, -Trp, -Ura	430	DCS1561	DCS1569
CSM, -His, -Leu, -Lys, -Trp, -Ura	550	DCS1571	DCS1579
CSM, -His, -Leu, -Met, -Trp, -Ura	580	DCS1581	DCS1589

8

Store all Drop-Out mixtures dry at room temperature



# HOPKINS MIXTURE, SYNTHETIC COMPLETE SUPPLEMENT MIXTURE, (SCSM)

## Hopkins Mixture

F. Spencer et al. Methods Companion to ME 5:173, (1993)

Hopkins Drop-Out mixtures are added to SD Broth or SD Agar.

SD media are available with glucose (dextrose), galactose, raffinose or a combination of galactose and raffinose as a carbon source.

## Synthetic Complete Supplement Mixture (SCSM)

formulations are available in 30 gram pack sizes. If you would like a larger pack size, please contact us by email or telephone.

Please enquire about custom made formulations.

## COMPLETE SCSM MIXTURE

### Size

30g

Formula	mg/l
Adenine	21.0
L-Alanine	85.6
L-Arginine HCl	85.6
L-Asparagine	85.6
Aspartic Acid	85.6
L-Cysteine HCl	85.6
L-Glutamine	85.6
L-Glutamic Acid	85.6
Glycine	85.6
L-Histidine HCl	85.6
myo-Inositol	85.6
L-Isoleucine	85.6
L-Leucine	173.4
L-Lysine HCl	85.6
L-Methionine	85.6
para-Aminobenzoic Acid	8.6
L-Phenylalanine	85.6
L-Proline	85.6
L-Serine	85.6
L-Threonine	85.6
L-Tryptophan	85.6
L-Tyrosine	85.6
Uracil	85.6
L-Valine	85.6
<b>Total</b>	<b>2000.6</b>



GHS07 Skin & Eye Irritation

## SCSM SINGLE DROP-OUTS

Formulation	mg/l	30g
SCSM, -Ade	1979.6	DSCS021
SCSM, -Cys	1915.0	DSCS031
SCSM, -His	1915.0	DSCS041
SCSM, -Leu	1827.2	DSCS051
SCSM, -Lys	1915.0	DSCS061
SCSM, -Met	1915.0	DSCS071
SCSM, -Pro	1915.0	DSCS081
SCSM, -Trp	1915.0	DSCS091
SCSM, -Ura	1915.0	DSCS101

## SCSM DOUBLE DROP-OUTS

Formulation	mg/l	30g
SCSM, -Ade, -Leu	1806.2	DSCS111
SCSM, -Ade, -Lys	1894.0	DSCS121
SCSM, -Ade, -Trp	1894.0	DSCS131
SCSM, -Cys, -Met	1829.4	DSCS141
SCSM, -His, -Leu	1741.6	DSCS151
SCSM, -His, -Ura	1829.4	DSCS161
SCSM, -Leu, -Trp	1741.6	DSCS171
SCSM, -Leu, -Ura	1741.6	DSCS181
SCSM, -Met, -Ura	1829.4	DSCS191
SCSM, -Trp, -Ura	1829.4	DSCS201
SCSM, -Ura, -Inositol	1829.4	DSCS211

## SCSM TRIPLE DROP-OUTS

Formulation	mg/l	30g
SCSM, -Cys, -His, -Met	1743.8	DSCS221
SCSM, -Cys, -Met, -Ura	1743.8	DSCS231
SCSM, -His, -Leu, -Trp	1656.0	DSCS241
SCSM, -His, -Leu, -Ura	1656.0	DSCS251
SCSM, -His, -Trp, -Ura	1743.8	DSCS261

## SCSM QUADRUPLE DROP-OUTS

Formulation	mg/l	30g
SCSM, -Ade, -His, -Leu, -Trp	1635.0	DSCS271
SCSM, -His, -Leu, -Trp, -Ura	1570.4	DSCS281

## SCSM MULTIPLE DROP-OUTS

Formulation	mg/l	30g
SCSM, -Ade, -His, -Leu, -Lys, -Trp, -Ura	1463.8	DSCS291
SCSM, -Cys, -Leu, -Lys, -Met, -Trp, -Ura	1399.2	DSCS301
SCSM, -Ade, -Arg, -His, -Leu, -Met, -Thr, -Trp, -Ura	1292.6	DSCS311

Store all Drop-Out mixtures dry at room temperature

# KAISER MIXTURE, SYNTHETIC COMPLETE DROP-OUT MIXTURE, (SC)

Ref.: Kaiser, C. et al., Methods in Yeast Genetics, Cold Spring harbour (New York : 1994).

Drop-Out supplements are based upon a standard mixture of Amino Acids, Vitamins and other components to supplement encountered auxotrophies. In each of the Drop-Out mixtures provided by Formedium™ each of these components is provided except one to five supplements of interest, i.e. the “dropped out” supplements.

Drop-Out mixtures are often used in combination with

Yeast Nitrogen Base without Amino Acids to test for auxotrophies and transformants.

Each of the Drop-Out mixtures, without one or more essential nutrients, is useful for the selection of auxotrophic requirements and transformants.

Synthetic Complete Amino Acid supplements are available in 20 gram and 100 gram pack sizes. Please contact us if you would like to order or get a quotation for a larger pack size.

## COMPLETE SC MIXTURE

### Size

20g  
100g

Formula	mg/l
Adenine	18
L-Alanine	76
L-Arginine HCl	76
L-Asparagine	76
Aspartic Acid	76
L-Cysteine	76
L-Glutamine	76
L-Glutamic Acid	76
Glycine	76
L-Histidine	76
myo-Inositol	76
L-Isoleucine	76
L-Leucine	380
L-Lysine	76
L-Methionine	76
para-Aminobenzoic Acid	8
L-Phenylalanine	76
L-Proline	76
L-Serine	76
L-Threonine	76
L-Tryptophan	76
L-Tyrosine	76
Uracil	76
L-Valine	76
<b>Total</b>	<b>2002</b>



GHS07 Skin & Eye Irritation

## COMPLETE SC MIXTURE

Formulation	mg/l	20g	100g
SC	2002	DSCCK012	DSCCK1000

## SC SINGLE DROP-OUTS

Formulation	mg/l	20g	100g
SC, -Ade	1984	DSCCK022	DSCCK1001
SC, -Cys	1926	DSCCK032	DSCCK1002
SC, -His	1926	DSCCK042	DSCCK1003
SC, -Leu	1622	DSCCK052	DSCCK1004
SC, -Lys	1926	DSCCK062	DSCCK1005
SC, -Met	1926	DSCCK072	DSCCK1006
SC, -Pro	1926	DSCCK082	DSCCK1007
SC, -Trp	1926	DSCCK092	DSCCK1008
SC, -Ura	1926	DSCCK102	DSCCK1009

## SC DOUBLE DROP-OUTS

Formulation	mg/l	20g	100g
SC, -Ade, -Leu	1604	DSCCK112	DSCCK1010
SC, -Ade, -Lys	1908	DSCCK122	DSCCK1011
SC, -Ade, -Trp	1908	DSCCK132	DSCCK1012
SC, -Cys, -Met	1850	DSCCK142	DSCCK1013
SC, -His, -Leu	1546	DSCCK152	DSCCK1014
SC, -His, -Ura	1850	DSCCK162	DSCCK1015
SC, -Leu, -Trp	1546	DSCCK172	DSCCK1016
SC, -Leu, -Ura	1546	DSCCK182	DSCCK1017
SC, -Met, -Ura	1850	DSCCK192	DSCCK1018
SC, -Trp, -Ura	1850	DSCCK202	DSCCK1019
SC, -Ura, -Inositol	1850	DSCCK212	DSCCK1020

## SC TRIPLE DROP-OUTS

Formulation	mg/l	20g	100g
SC, -Cys, -His, -Met	1774	DSCCK222	DSCCK1001
SC, -Cys, -Met, -Ura	1774	DSCCK232	DSCCK1422
SC, -His, -Leu, -Trp	1470	DSCCK242	DSCCK1023
SC, -His, -Leu, -Ura	1470	DSCCK252	DSCCK1024
SC, -His, -Trp, -Ura	1774	DSCCK262	DSCCK1025
SC, -Leu, -Trp, -Ura	1470	DSCCK265	DSCCK1035

## SC QUADRUPLE DROP-OUTS

Formulation	mg/l	20g	100g
SC, -Ade, -His, -Leu, -Trp	1452	DSCCK272	DSCCK1026
SC, -His, -Leu, -Trp, -Ura	1394	DSCCK282	DSCCK1027

## SC MULTIPLE DROP-OUTS

Formulation	mg/l	20g	100g
SC, -Ade, -His, -Leu, -Lys, -Trp, -Ura	1300	DSCCK292	DSCCK1028
SC, -Cys, -Leu, -Lys, -Met, -Trp, -Ura	1242	DSCCK302	DSCCK1029
SC, -Ade, -Arg, -His, -Leu, -Met, -Thr, -Trp, -Ura	1148	DSCCK312	DSCCK1030

Store all Drop-Out mixtures dry at room temperature

## BRENT SUPPLEMENT MIXTURE, (BSM)

Brent Supplement Mixture (BSM) is used in combination with the Interaction Trap two-hybrid system.

BSM Drop-Out mixtures are added to SD Broth or SD Agar.

SD media are available with glucose (dextrose), galactose, raffinose, or a combination of galactose and raffinose as a carbon source.

Brent Supplement Mixture formulations are available in 25 gram pack sizes. If you would like a quotation for a larger pack size, please contact us.

Please enquire about custom made formulations.

## COMPLETE BSM MIXTURE

### Size

25g

Formula	mg/l
Adenine	40
L-Arginine HCl	20
L-Aspartic Acid	100
Glutamic Acid	100
L-Histidine	20
L-Isoleucine	300
L-Leucine	60
L-Lysine HCl	30
L-Methionine	20
L-Phenylalanine	50
L-Serine	375
L-Threonine	200
L-Tryptophan	40
L-Tyrosine	30
Uracil	20
Valine	150
<b>Total</b>	<b>1555</b>



GHS07 Skin & Eye Irritation

## BSM SINGLE DROP-OUTS

Formulation	mg/l	30g
BSM, -His	1535	DBSM022
BSM, -Trp	1515	DBSM032
BSM, -Ura	1535	DBSM042

## BSM DOUBLE DROP-OUTS

Formulation	mg/l	30g
BSM, -His, -Ura	1515	DBSM052
BSM, -Leu, -Trp	1455	DBSM062
BSM, -Trp, -Ura	1495	DBSM072

## BSM MULTIPLE DROP-OUTS

Formulation	mg/l	30g
BSM, His, -Leu, -Ura	1455	DBSM082
BSM, -His, -Trp, -Ura	1475	DBSM092
BSM, -Leu, -Trp, -Ura	1435	DBSM102
BSM, -his, -Leu, -Trp, -Ura	1415	DBSM112

Store all Drop-Out mixtures dry at room temperature

# HOLLENBERG SUPPLEMENT MIXTURE, (HSM)

Hollenberg Supplement Mixture (HSM) is used for this selection in the two hybrid system of Field as modified by Hollenberg.

HSM Drop-Out mixtures are added to SD media with succinate as the carbon source.

Hollenberg Supplement Mixture formulations are available in 50 gram pack sizes. If you would like a quotation for a larger pack size, please contact us.

Please enquire about custom made formulations.

Store all Drop-Out mixtures dry at room temperature

## COMPLETE HSM MIXTURE

Size

50g

Formula	mg/l
Adenine	100
L-Arginine	100
L-Aspartic Acid	50
Cysteine	100
L-Histidine	50
L-Isoleucine	50
L-Leucine	100
L-Lysine	100
L-Methionine	50
L-Phenylalanine	50
L-proline	50
L-Serine	50
L-Threonine	100
L-Tryptophan	100
L-Tyrosine	50
Uracil	100
Valine	50
<b>Total</b>	<b>1250</b>



GHS07 Skin & Eye Irritation

## HSM SINGLE DROP-OUTS

Formulation	mg/l	50g
HSM, -His	1200	DHSM015
HSM, -Leu	1150	DHSM025
HSM, -Lys	1150	DHSM035
HSM, -Trp	1150	DHSM045
HSM, -Ura	1150	DHSM055

## HSM DOUBLE DROP-OUTS

Formulation	mg/l	50g
HSM, -Leu, -Trp	1050	DHSM065
HSM, -Trp, -Ura	1050	DHSM075
HSM, -Leu, -Ura	1050	DHSM085

## HSM TRIPLE DROP-OUTS

Formulation	mg/l	50g
HSM, -His, -Leu, -Trp	1000	DHSM095
HSM, -His, -Leu, -Ura	1000	DHSM105
HSM, -His, -Lys, -Ura	1000	DHSM115
HSM, -His, -Trp, -Ura	1000	DHSM125
HSM, -Met, -Trp, -Ura	1000	DHSM135
HSM, -Leu, -Trp, -Ura	950	DHSM145

## HSM MULTIPLE DROP-OUTS

Formulation	mg/l	50g
HSM, -His, -Leu, -Trp, -Ura	900	DHSM155
HSM, -His, -Lys, -Trp, -Ura	900	DHSM165
HSM, -His, -Leu, -Lys, -Trp, -Ura	900	DHSM175
HSM, -Ade, -His, -Leu, -Lys, -Met, -Trp, -Ura	900	DHSM185

Store all Drop-Out mixtures dry at room temperature







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