MP Biomedicals, LLC
QBioGene

29525 Fountain Parkway
Solon, Ohio 44139

Telephone: 440/337-1200
Toll Free: 800/854-0530

Fax: 440/337-1180
web: www.mpbio.com

Certificate of Analysis

Product: CSM-Ade-His-Leu-Lys-Trp-Ura
Catalog No.: 4560-1x2; 4560-112; 4560-122
Lot No.: 78833

FORMULATION:

Drop-Out Supplements	mg/L
Adenine	0
L-Arginine HCl	50
L-Aspartic Acid	80
L-Histidine HCl	0
L-Isoleucine	50
L-Leucine	0
L-Lysine HCl	0
L-Methionine	20
L-Phenylalanine	50
L-Threonine	100
L-Tryptophan	0
L-Tyrosine	50
Uracil	0
L-Valine	140
Total	**520**

Recommended Use:
Add 0.54 g of CSM-Ade-His-Leu-Lys-Trp-Ura to each liter of DOB (or DOBA) and autoclave at 121°C for 25 minutes for complete synthetic defined single drop-out medium for *S.cerevisiae.*

Storage:
Store CSM-Ade-His-Leu-Lys-Trp-Ura powder at ambient temperature (15-30°C). CSM-Ade-His-Leu-Lys-Trp-Ura powder is hygroscopic, therefore minimize exposure to air to prolong storage of powder mixture. Store sterile agar medium at 4°C. And liquid medium at 15-30°C in subdued light.

Shelf Life: Storage life in closed container: 4 years from the date the powder was made.

Quality Assurance Information

All MP Biomedicals products are thoroughly tested to ensure reliable results in the laboratory.

Media Preparation:
Reagents are tested and chosen for their ability to promote optimum growth of yeast strains when combined in the DOB (or DOBA) withCSM-Ade-His-Leu-Lys-Trp-Ura formula. DOB (Drop Out Base) is 1.7g Yeast Nitrogen Base, 5g Ammonium Sulfate, 20g Dextrose per liter. DOBA is DOB with 17% agar. Chosen reagents are combined in the proper proportions according to the formulation listed in the certificate of analysis and milled to a powder which thoroughly blends the reagents for uniform distribution. A sample of the milled and blended formulation was used to prepare liquid medium (or plate medium) by adding 2.7g DOB (or 4.37g DOBA) powder and 0.054 g of CSM-Ade-His-Leu-Lys-Trp-Ura to a 100 mL of purified water. The combinations were mixed by hand for about 1 minute to dissolve the dextrose and autoclaved at 121°C for 25 minutes. After cooling to 50°C, plates of DOBA with CSM-Ade-His-Leu-Lys-Trp-Ura were poured.

Quality Control Assay:
DOB (or DOBA) with CSM-Ade-His-Leu-Lys-Trp-Ura was visually inspected after autoclaving for complete dissolution of components. The pH of the medium was tested to insure that the proper specification was attained.
Acceptable pH range is 4.0 - 4.8 for DOB with CSM-Ade-His-Leu-Lys-Trp-Ura, report result for DOBA with CSM-Ade-His-Leu-Lys-Trp-Ura.
DOB (or DOBA) with CSM-Ade-His-Leu-Lys-Trp-Ura was tested by *S.cerevisiae* cell growth at 30°C for approximately 48 hours.

Results of Quality Control Assay:
DOB (or DOBA) with CSM-Ade-His-Leu-Lys-Trp-Ura liquid solution was determined to have **some floating particles**.
pH of solution of DOB with CSM-Ade-His-Leu-Lys-Trp-Ura was found to be **4.33@30.7°C**, pH of solution of DOBA with CSM-Ade-His-Leu-Lys-Trp-Ura was found to be **4.85@44.1°C**.
The cell growth of DOB (or DOBA) with CSM-Ade-His-Leu-Lys-Trp-Ura passed the test.

Conclusions: This lot of CSM-Ade-His-Leu-Lys-Trp-Ura is released for product sales.

12/09/2015 - John Huang, PhD
QBioGene/MP Biomedicals, LLC
Quality Control Manager

MSDS available online at www.mpbio.com