

## Product Information

DMEM Advanced High Glucose (4.5 g/L), w/o L-Glutamine, with Non-Essential Amino Acids, with Sodium Pyruvate  
Cat. No. DMEM-ADV-500ML

### General Information

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DMEM Advanced is based on the classical media formulation supplemented with advanced nutrients like Insulin, Transferrin and Trace elements. The additional nutrients enable a 50-90% less Fetal Bovine Serum (FBS) supplementation required for the *in vitro* cell culture of mammalian cells.

DMEM Advanced supports cellular proliferation and maximum cell densities comparable, and in some cases superior, to the conventional basal formulation supplemented with 10% FBS.

Serum reduction improves the consistency, safety and reproducibility of experimental results by decreasing the variability caused due to undefined serum constituents.

Appearance	Clear red orange solution
CO <sub>2</sub> concentration, optimum	8.5 %
Storage and shelf life	Store at +2°C to +8°C protected from light. Once opened, store at 4° C and use within 6-8 weeks.
Shipping conditions	Ambient

### Instructions for Use:

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- Recommended concentrations of serum using DMEM Advanced ranges from 1-5 % Fetal Bovine Serum.
- No weaning procedures are necessary to reduce serum supplementation by at least 50%.
- The percentage of serum reduction may vary according to cell lines and should be adjusted to achieve optimal results.
- The conversion can be made by simply centrifuging the cells, decanting the supernatant, and resuspending them in the reduced-serum supplemented medium.
- If using antibiotics, we recommend reducing the amount in proportion to the amount of serum.

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### Formulation

Components	Concentration mg/L
<b>Amino Acids:</b>	
Glycine	37.50
L-Alanine	8.90
L-Arginine HCl	84.00
L-Asparagine	13.20
L-Aspartic acid	13.30
L-Cystine 2 HCl	63.00
L-Glutamine	584.00
L-Glutamic acid	14.70
L-Histidine HCl H <sub>2</sub> O	42.00
L-Isoleucine	105.00
L-Leucine	105.00
L-Lysine HCl	146.00
L-Methionine	30.00
L-Phenylalanine	66.00
L-Proline	11.50
L-Serine	52.50
L-Threonine	95.00
L-Tryptophan	16.00
L-Tyrosine 2 Na	104.00
L-Valine	94.00
<b>Vitamins:</b>	
Ascorbic Acid phosphate	2.50
Choline chloride	4.00
D-Calcium Pantothenate	4.00
Folic Acid	4.00
myo-Inositol	7.20
Nicotinamide	4.00
Pyridoxal HCl	4.00
Riboflavin	0.40
Thiamine HCl	4.00

Components	Concentration mg/L
<b>Inorganic Salts:</b>	
CaCl <sub>2</sub> 2 H <sub>2</sub> O	200.00
Fe(NO <sub>3</sub> ) <sub>3</sub> 9 H <sub>2</sub> O	0.10
KCl	400.00
MgSO <sub>4</sub>	97.67
NaCl	6400.00
NaHCO <sub>3</sub>	3700.00
NaH <sub>2</sub> PO <sub>4</sub>	125.00
<b>Proteins:</b>	
BSA	400.00
Holo-Transferrin (human)	7.50
Insulin (recombinant, human)	10.00
<b>Trace Elements:</b>	
Ammonium Metavanadate	0.0003
Cupric Sulfate	0.00125
Manganous Sulfate	0.0000427
Sodium Selenite	0.005
<b>Other Components:</b>	
D-Glucose	4500.00
Ethanolamine	1.90
Glutathione (reduced)	1.00
Phenol Red Sodium Salt	15.90
Sodium Pyruvate	110.00

### Precautions and Disclaimer

This product is for research use only.

### Help Needed?

If you have any further questions regarding this product, please do not hesitate to contact our cell culture experts by email (techservice@capricorn-scientific.com) or phone (+49 6424 944640).