

## 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. 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 and minimize the major concerns in the risk of contamination of FBS with harmful pathogens such as prions, viruses or Mycoplasma.

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

**Note:** Increase safety of your cell culture even more through combining this medium with Gamma irradiated FBS (Cat-No: FBS-GI-12A).

### Instructions for Use:

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- Recommended concentrations of serum using DMEM Advanced ranges from 1-5 % Fetal Bovine Serum (e.g. FBS-GI-12A).
- 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).