

Major Application and Mixture Description

Therapy – Medical Drug Gases

Carbon Dioxide 5%/Oxygen
 Carbon Dioxide 10%/Oxygen
 Oxygen 20%/Helium
 Oxygen 30%/Helium

Diagnostic – Medical Device Gases

Lung Diffusion for Pulmonary Function Studies

Carbon Monoxide 0.3%, Helium 10%, Oxygen 21%/N₂
 Carbon Monoxide 0.3%, Neon 0.5%, Oxygen 21%/N₂
 Carbon Monoxide 0.3%, Methane 0.3%, Oxygen 21%/N₂
 Acetylene 0.3%, Carbon Monoxide 0.3%,
 Methane 0.3%, Oxygen 21%/N₂

Diagnostic – Blood Gas Analysis

Carbon Dioxide 2-14%/Nitrogen
 Carbon Dioxide 7-12%/Oxygen
 Oxygen 1-19%/Nitrogen
 Carbon Dioxide 2-12%,
 Oxygen 12-25%/Nitrogen

Biological Incubation Atmospheres

Mixture Description

Carbon Dioxide 1.0-7.0%/Oxygen
 Carbon Dioxide 7.1-12.0%/Oxygen
 Carbon Dioxide 12.1-23%/Oxygen
 Carbon Dioxide 23.1-50%/Oxygen
 Oxygen 18.0-23.5%/Helium
 Oxygen 23.6-50%/Helium
 Oxygen 23.5-50%/Nitrogen
 Liquid-Med Analgesic Gas (O₂ 50%/Nitrous Oxide)
 Carbon Dioxide 1.0-15%, Oxygen 21%/Nitrogen
 Carbon Dioxide 15.1-30%, Oxygen 21%/Nitrogen
 Carbon Dioxide 30.1-50%, Oxygen 21%/Nitrogen
 CO 0.3%, Helium 10%, Oxygen 21%/Nitrogen
 CO 0.3%, Neon 0.5%, Oxygen 21%/Nitrogen

Biological Incubation Atmospheres

Carbon Dioxide 1.0-7.0%/Oxygen
 Carbon Dioxide 7.1-12.0%/Oxygen
 Carbon Dioxide 12.1-23%/Oxygen
 Carbon Dioxide 23.1-50%/Oxygen
 Oxygen 18.0-23.5%/Helium
 Oxygen 23.6-50%/Helium
 Oxygen 23.5-50%/Nitrogen
 Liquid-Med Analgesic Gas (O₂ 50%/Nitrous Oxide)
 Carbon Dioxide 1.0-15%, Oxygen 21%/Nitrogen
 Carbon Dioxide 15.1-30%, Oxygen 21%/Nitrogen
 Carbon Dioxide 30.1-50%, Oxygen 21%/Nitrogen
 CO 0.3%, Helium 10%, Oxygen 21%/Nitrogen
 CO 0.3%, Neon 0.5%, Oxygen 21%/Nitrogen



STERILIZING GAS MIXTURES

COMPONENTS			
12% Ethylene Oxide Balance Dichlorodifluoromethane (R12)			
8.6% Ethylene Oxide Balance Chlorotetrafluoroethane (R124)			
10%-20% Ethylene Oxide Balance Carbon Dioxide			

BIOLOGICAL ATMOSPHERE GAS MIXTURES

COMPONENTS			
ANAEROBIC GROWTH MIXTURE 3% Hydrogen Balance Carbon Dioxide			
ANAEROBIC GROWTH MIXTURE 0.5%-10% Carbon Dioxide Balance Nitrogen			
ANAEROBIC GROWTH MIXTURE 0.5%-10% Carbon Dioxide, 0.5%-10% Hydrogen Balance Nitrogen			
AEROBIC GROWTH MIXTURE 0.5%-10% Carbon Dioxide Balance Oxygen			
AEROBIC GROWTH MIXTURE 0.5%-10% Carbon Dioxide Balance Air			



NITROUS OXIDE (N2O)

Nitrous Oxide U.S.P.
Specification
$N_2O \geq 99.0\%$
$CO \leq 10 \text{ ppm}$
$Air \leq 1.0\%$
$CO_2 \leq 300 \text{ ppm}$
$NO \leq 1 \text{ ppm}$
$NO_2 \leq 1 \text{ ppm}$
$NH_3 \leq 25 \text{ ppm}$
$Halogens \leq 1 \text{ ppm}$
$H_2O \leq 200 \text{ ppm}$

LASER EXCIMER GASES

COMPONENTS				
Ar F (193nm): 0.20% Fluorine, 9.0% Argon Balance Helium and/or Neon				
Kr F (248nm): 0.10% Fluorine, 1.0% Krypton Balance Helium or Neon				
Xe Cl (308nm): 0.06% Hydrogen Chloride, 0.03% Hydrogen, 1.5% Xenon, Balance Helium or Neon				
* Above are some typical excimer premixes, others include Xe F (351nm) and Kr Cl (222nm), For your particular requirements and application, please contact us for details.				

