

PRODUCT IDENTIFICATION

**Product Name:** Hydrogen Peroxide 10% ACS Grade**CAS Number:** 7722-84-1**Molecular Formula:** H_2O_2 **Molecular Weight:** 34.015 g/mol**Grade:** ACS Grade**Purity / Concentration:** 10%**Synonyms:** Hydrogen Dioxide, Peroxide Solution

PRODUCT OVERVIEW

Hydrogen Peroxide 10% ACS Grade is a high-purity oxidizing agent meticulously tested to meet stringent American Chemical Society standards. With a precisely controlled assay of 10% and trace metal impurities like copper at a low 0.03 ppm, this solution provides the consistency required for sensitive laboratory and industrial processes.

Grade Significance: The ACS Grade designation ensures that the chemical meets the high purity standards established by the American Chemical Society, guaranteeing minimal trace contaminants for consistent, reliable results.

CERTIFICATE OF ANALYSIS — TYPICAL VALUES

PARAMETER	UNIT	TYPICAL	MIN	MAX	TEST METHOD
Assay (Permanganate)	%	10	9.5	10.5	Permanganate Titration
Residue On Evaporation	ppm	6	0	20	Evaporation
Aluminum Al	ppm	0.3	0	1	ICP-MS
Arsenic Antimony As As	ppm	0.0030	0	0.01	ICP-MS
Calcium Ca	ppm	0.3	0	1	ICP-MS
Cobalt Co	ppm	0.15	0	0.5	ICP-MS
Copper	ppm	0.03	0	0.1	ICP
Iron	ppm	0.15	0	0.5	ICP
Lead Pb	ppm	0.15	0	0.5	ICP-MS
Magnesium Mg	ppm	0.03	0	0.1	ICP-MS
Manganese	ppm	0.3	0	1	ICP
Nickel Ni	ppm	0.03	0	0.1	ICP-MS
Potassium K	ppm	0.3	0	1	ICP-MS
Sodium Na	ppm	0.3	0	1	ICP-MS
Zinc Zn	ppm	0.3	0	1	ICP-MS
Chloride Cl	ppm	0.6	0	2	ICP
Phosphate Po4	ppm	0.6	0	2	ICP
Sulfate So4	ppm	1.5	0	5	ICP
Barium Ba	ppm	0.3	0	1	ICP-MS
Boron B	ppm	0.15	0	0.5	ICP-MS
Cadmium Cd	ppm	0.3	0	1	ICP-MS
Free Acid As H2So4	ueq/g	0.18	0	0.6	Titration
Silicon Si	ppm	0.3	0	1	ICP-MS
Silver Ag	ppm	0.15	0	0.5	ICP-MS
Strontium Sr	ppm	0.3	0	1	ICP-MS
Tin Sn	ppm	0.3	0	1	ICP-MS

ND = Not Detected. Values are typical and may vary by lot.

PHYSICAL & CHEMICAL PROPERTIES

Appearance	Clear, colorless liquid	Odor	Slightly sharp, characteristic odor
Form	Liquid	Boiling Point	Not characterized for the 10% solution
Melting / Freezing Point	Not characterized for the 10% solution	Specific Gravity	1.035
Solubility	Completely soluble in water	Molecular Formula	H ₂ O ₂
Molecular Weight	34.015 g/mol	Vapor Pressure (20°C)	6.3 mmHg
Viscosity (25°C)	1.12 cP	Refractive Index (20°C)	1.406
Density (25°C)	1.01 g/mL	Decomposition Temp.	not applicable

APPLICATIONS

1. **Analytical Chemistry** — Utilized as a reliable reagent for precise titrations and complex assays where high chemical purity is essential.
2. **Water Treatment** — Functions as a potent oxidizer to improve water quality and effectively remove organic contaminants from process streams.
3. **Textile Manufacturing** — Acts as a controlled bleaching agent to brighten fabrics while maintaining the structural integrity of the fibers.
4. **Chemical Processing** — Serves as a fundamental oxidizing agent in various synthetic pathways and industrial oxidation reactions.

STORAGE & HANDLING

Proper storage is critical because Hydrogen Peroxide is a strong oxidizer that can intensify fires if it comes into contact with incompatible materials. It should be stored in a cool, well-ventilated area away from combustible substances to prevent decomposition and ensure user safety.

- Store in a cool, dry place away from direct sunlight and heat sources.
- Use containers made of HDPE or glass to prevent reactions with metals.
- Avoid contact with organic materials and reducing agents to prevent hazardous reactions.
- Ensure proper ventilation when handling to minimize inhalation risks.
- Wear appropriate personal protective equipment (PPE) including gloves and goggles.

AVAILABLE PACKAGING

- 1 Quart
- 1 Gallon
- 5 Gallon
- 15 Gallon
- 55 Gallon
- 275 Gallon
- 330 Gallon

SAFETY SUMMARY (CROSS-REFERENCE TO SDS)

Signal Word: **Danger**



Hazard Statements:

- H272: May intensify fire; oxidiser
- H302: Harmful if swallowed
- H318: Causes serious eye damage

Emergency Contact: CHEMTEL - 800-255-3924 (24 Hours/Day, 7 Days/Week)

For complete safety information, refer to the Safety Data Sheet (SDS) for this product.

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