

PRODUCT IDENTIFICATION

**Product Name:** Hydrogen Peroxide 30% ACS Grade**CAS Number:** 7722-84-1**Molecular Formula:** H_2O_2 **Molecular Weight:** 34.015 g/mol**Grade:** ACS Grade**Purity / Concentration:** 30%**Synonyms:** Hydrogen Peroxide Solution, Peroxide 30%

PRODUCT OVERVIEW

Hydrogen Peroxide 30% ACS Grade is a high-purity, clear, and colorless liquid formulated for demanding laboratory and industrial applications. With an assay of 31.4% and trace metal impurities like aluminum and arsenic measured at or below 0.0010 ppm, this reagent serves as a powerful oxidizing agent. It is essential for processes requiring consistent chemical performance and minimal contamination.

Grade Significance: ACS Grade signifies that this product meets the rigorous purity standards set by the American Chemical Society, ensuring it is suitable for analytical use where precision is critical. This grade provides the end user with the confidence that trace metal contaminants are kept at extremely low, documented levels.

CERTIFICATE OF ANALYSIS — TYPICAL VALUES

PARAMETER	UNIT	TYPICAL	MIN	MAX	TEST METHOD
Assay (Permanganate)	%	31.4	29	32	Permanganate Titration
Residue On Evaporation	ppm	5	0	20	Evaporation
Aluminum Al	ppm	0.0010	0	1	ICP-MS
Arsenic Antimony As As	ppm	0.0010	0	0.01	ICP-MS
Calcium Ca	ppm	0.01	0	1	ICP-MS
Cobalt Co	ppm	0.0010	0	0.5	ICP-MS
Copper	ppm	0.0010	0	0.1	ICP
Iron	ppm	0.01	0	0.5	ICP
Lead Pb	ppm	0.0010	0	0.5	ICP-MS
Magnesium Mg	ppm	0.0050	0	0.1	ICP-MS
Manganese	ppm	0.0010	0	1	ICP
Nickel Ni	ppm	0.0010	0	0.1	ICP-MS
Potassium K	ppm	0.01	0	1	ICP-MS
Sodium Na	ppm	0.01	0	1	ICP-MS
Zinc Zn	ppm	0.01	0	1	ICP-MS
Chloride Cl	ppm	1	0	2	ICP
Phosphate Po4	ppm	1	0	2	ICP
Sulfate So4	ppm	1	0	5	ICP
Barium Ba	ppm	0.0010	0	1	ICP-MS
Boron B	ppm	0.0050	0	0.5	ICP-MS
Cadmium Cd	ppm	0.0010	0	1	ICP-MS
Free Acid As H2So4	ueq/g	0.1	0	0.6	Titration
Silicon Si	ppm	0.01	0	1	ICP-MS
Silver Ag	ppm	0.0010	0	0.5	ICP-MS
Strontium Sr	ppm	0.0010	0	1	ICP-MS
Tin Sn	ppm	0.0010	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, pungent odor
Form	Liquid	Boiling Point	Not characterized for the 30% solution
Melting / Freezing Point	Not characterized for the 30% solution	Flash Point	11°C (52°F)
Specific Gravity	1.11	Solubility	Soluble in water, miscible with many organic solvents
Molecular Formula	H ₂ O ₂	Molecular Weight	34.015 g/mol
Vapor Pressure (20°C)	0.4 mmHg	Viscosity (25°C)	1.2 cP
Refractive Index (20°C)	1.406	Density (25°C)	1.11 g/mL

APPLICATIONS

1. **Analytical Chemistry** — Functions as a high-precision reagent for various assays where strict purity standards are required to ensure accurate results.
2. **Textile Manufacturing** — Utilized as a potent bleaching agent to achieve superior whiteness in fabrics without leaving unwanted metallic residues.
3. **Paper and Pulp** — Applied in the bleaching process to remove lignin and improve the brightness of paper products.
4. **Water Treatment** — Acts as an effective oxidizer to neutralize contaminants and improve water quality in industrial treatment systems.
5. **Chemical Synthesis** — Serves as a fundamental oxidizing agent in various synthetic chemical reactions, providing reliable performance due to its high purity.

STORAGE & HANDLING

Hydrogen Peroxide 30% must be stored in a cool, well-ventilated area away from combustible materials, as it is a strong oxidizer that can intensify fires. Because it is prone to decomposition, maintaining proper storage conditions is essential to ensure product stability and prevent the buildup of pressure within containers. Handling requires extreme caution due to its potential to cause severe skin burns and eye damage.

- Store in a cool, dry place away from direct sunlight.
- Use containers made of HDPE or glass to prevent reactions.
- Avoid contact with organic materials and reducing agents.
- Handle with appropriate personal protective equipment (PPE) including gloves and goggles.
- Ensure adequate ventilation when handling to avoid inhalation of vapors.

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
- H314: Causes severe skin burns and eye damage
- H332: Harmful if inhaled
- H335: May cause respiratory irritation

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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