

PRODUCT IDENTIFICATION

**Product Name:** Hydrogen Peroxide 6% ACS Grade**CAS Number:** 7722-84-1**Molecular Formula:** H_2O_2 **Molecular Weight:** 34.015 g/mol**Grade:** ACS Grade**Purity / Concentration:** 6%**Synonyms:** Hydrogen Dioxide, Peroxide Solution

PRODUCT OVERVIEW

Hydrogen Peroxide 6% ACS Grade is a high-purity, colorless oxidizing agent meticulously tested to meet stringent analytical standards. With a precisely verified assay of 6% and extremely low trace metal content, this solution is designed for reliable performance in sensitive chemical and laboratory environments.

Grade Significance: ACS Grade signifies that this product meets the rigorous purity standards set by the American Chemical Society, ensuring it is suitable for critical laboratory and analytical applications where consistent results are mandatory.

CERTIFICATE OF ANALYSIS — TYPICAL VALUES

PARAMETER	UNIT	TYPICAL	MIN	MAX	TEST METHOD
Assay (wt%)	%	6	5.8	6.2	Iodometric titration (potassium iodide) with back-titration using standardized thiosulfate
Color (APHA)	APHA	2	—	5	APHA/Hazen visual comparison
Specific Gravity (20°C)	g/mL	1.012	1.01	1.015	Hydrometer or pycnometer at 20°C
Residue After Ignition	%	0.01	—	0.02	Gravimetric analysis after ignition
Aluminum (Al)	ppm	0.05	—	0.2	ICP-OES
Arsenic (As)	ppm	0.0050	—	0.01	ICP-MS
Calcium (Ca)	ppm	0.4	—	1	ICP-OES
Chromium (Cr)	ppm	0.05	—	0.2	ICP-OES
Cobalt (Co)	ppm	0.03	—	0.1	ICP-OES
Copper (Cu)	ppm	0.05	—	0.1	ICP-OES
Heavy Metals (as Pb)	ppm	0.0050	—	0.01	ICP-MS
Iron (Fe)	ppm	0.05	—	0.2	ICP-OES or ICP-MS
Lead (Pb)	ppm	0.03	—	0.1	ICP-OES
Magnesium (Mg)	ppm	0.4	—	1	ICP-OES
Manganese (Mn)	ppm	0.03	—	0.1	ICP-OES
Nickel (Ni)	ppm	0.04	—	0.1	ICP-OES
Potassium (K)	ppm	0.2	—	0.5	ICP-OES
Sodium (Na)	ppm	0.2	—	0.5	ICP-OES
Zinc (Zn)	ppm	0.08	—	0.2	ICP-OES
Ammonium (NH ₄ ⁺)	ppm	0.2	—	0.5	Ion Chromatography (IC)
Chloride (Cl ⁻)	ppm	0.2	—	0.5	Ion Chromatography (IC) or ICP-OES
Nitrate (NO ₃ ⁻)	ppm	0.5	—	1	Ion Chromatography (IC)
Phosphate (PO ₄ ³⁻)	ppm	0.2	—	0.5	Ion Chromatography (IC)
Sulfate (SO ₄ ²⁻)	ppm	1	—	2	Ion Chromatography (IC)

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

PHYSICAL & CHEMICAL PROPERTIES

Appearance	Transparent, colorless liquid solution	Form	Liquid
Boiling Point	Not characterized for the 6% solution	Melting / Freezing Point	Not characterized for the 6% solution
Flash Point	42°C (107.6°F)	Specific Gravity	1.02
Solubility	Highly water miscible, polar solvent compatible	Molecular Formula	H ₂ O ₂
Molecular Weight	34.015 g/mol		

APPLICATIONS

1. **Laboratory Research** — Used as a high-purity reagent for analytical procedures and titrations where precise concentration control is critical.
2. **Water Treatment** — Employed to effectively oxidize and control organic contaminants, ensuring water quality meets environmental and safety standards.
3. **Textile Manufacturing** — Functions as a reliable bleaching agent to achieve consistent whitening and preparation of fabrics during processing.
4. **Chemical Synthesis** — Serves as a controlled oxidizing agent in various chemical reactions, facilitating stable and predictable process outcomes.

STORAGE & HANDLING

Proper storage is essential to prevent decomposition and maintain the stability of the peroxide solution. Because the product is classified with H319 eye irritation hazards, it must be stored in a cool, well-ventilated area away from incompatible materials to ensure both chemical integrity and workplace safety.

- 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.
- 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: Warning



Hazard Statements:

- H319: Causes serious eye 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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