

## Alternatives to Chromic Acid Cleaning Solutions

Cleaning solutions containing chromium are especially troublesome due to the strict government standards that dictate the disposal of heavy metals. The high toxicity, expense for disposal, and dangerous characteristics of these items, most commonly Chromerge™, has prompted our office to suggest some alternatives. There are an abundance of suitable cleaners available, depending on the contaminants needing removal and the vessels being cleaned. Below are a few effective items the Fisher™ catalogue has to offer.



### Citranox\* Liquid Acid Detergent

Specially formulated to remove scale, milkstone, metal oxides, fats, oils, greases, solvents, and metallic complexes from hard surfaces. Ideal for trace metal analysis. Can be diluted to 1 to 2% dilutions with warm or hot water. May be used manually or in ultrasonic machines. Dissolves instantly and rinses freely of interfering residues. Phosphate free; completely biodegradable. Odorless; nonflammable. Effective in hard water.

Size	Alconox #	Cat. No.	Each	Case of 4
1 gal	1801	04-322-12A	31.30	125.25
15 gal	1815	04-322-12B	375.74	N/A



### Liqui-Nox\* Detergent for Critical Cleaning

For use when analytical equipment must be totally free from residues that can affect results. Completely soluble, rinsable. Phosphate free. Noncorrosive. 8.2 to 9.2pH, mild enough for manual cleaning. Use in ultrasonic washers. Concentrated. Biodegradable.

Size	Alconox #	Cat. No.	Each	Case of
1 qt	1232	04-322-15A	8.95	12/107.54
1 gal	1201	04-322-15B	34.17	4/136.73
15 gal	1215	04-322-15C	366.87	N/A



### Nochromix\* Reagent

Inorganic oxidizer chemically cleans glassware. Contains no metal ions. Rinses freely—leaving no metal residue, making this product valuable for trace analysis, enzymology, and tissue culture work. Premeasured, 3 oz. (88.7mL) sealed packets. Mix with 9 pt. (2.5L) of sulfuric acid.

Cat. No.	Pack of 10
04-345-20	85.30



### Contrad 70 Liquid Detergent

#### For soak, manual and ultrasonic cleaning

Concentrated liquid detergent cleans glass, plastic, ceramic, and ferrous metals by soaking, scrubbing, or ultrasonic cleaning. Easily removes proteins, grease, oil, and baked on contaminants. Can safely replace acid washes and caustic baths. Excellent substitute for chromic acid. Non-toxic, phosphate-free, chlorine-free, and completely free-rinsing. USDA approved.

Size	Cat. No.	Each	Case of
1 L	04-355	19.00	12/228.00
5 L	04-355-1	73.50	4/267.16
20 L	04-355-2	260.00	N/A
210 L	04-355-3	1,566.02	N/A