

# Chelex 100 sodium form

## Analytical grade resin

Product Number: C27971

**Appearance:** White moist powder (swollen beads)

Capacity of Sodium Form: 0.7 meg/ml

**Storage Temperature:** Room Temperature

#### **Structure**

A styrene-divinylbenzene copolymer containing paired iminodiacetate ions which act as chelating groups in binding polyvalent metal ions. It is considered a weakly acidic resin.

#### Usage

Product is autoclavable in sodium form. It has a maximum operating temperature of 75°C and is not soluble in water. Binding is a function of pH. Absorption is very low below pH 2 and increases sharply from pH 2 to 4. It reaches a maximum above pH 4. Optimum binding for many divalent cations is at pH 6.5 or higher. Its selectivity for divalent over monovalent ions is approximately 5000 to 1, and it has a very strong attraction for transition metals, even in highly concentrated salt solutions. Actual selectivity values for any particular system depend on the pH, ionic strength, and presence of other complex-forming species. Metals can be removed using either the batch or column technique, although the column technique is more efficient. With 50-100 mesh, rapid flow rates are obtained and large volumes of solution can be processed in very little time. Resin can be regenerated by washing in the following sequence: 2 bed volumes of 1 N HCl, 5 bed volumes water, 2 bed volumes of 1 N NaOH, 5 bed volumes water.

#### **Applications**

Removal of metals from enzyme solutions<sup>2</sup>

Removal of metals from cell suspensions<sup>3</sup>

Calcium removal from dinucleotides<sup>4</sup>

Calcium removal from calmodulin and buffer<sup>5</sup>

Removal of calcium from erythrocyte lysates<sup>6</sup>

Reducing calcium and magnesium concentrations in tissue culture medium Effect of pH and ionic strength on chelating properties<sup>8</sup>

Stability of metal complexes<sup>9</sup>

Trace metal studies<sup>1</sup>

As a medium for extraction of DNA from forensic-type samples<sup>10</sup>

Removal of metal ion from guinea pig complement<sup>11</sup>

### References

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#### **Precautions and Disclaimer**

For Laboratory Use Only. Not for drug, household or other uses.