

AMBIENT SURFACE WATER QUALITY
STANDARDS DOCUMENTATION

CHEMICAL: 1-Hydroxyethylidene-1,1-diphosphonic acid

CAS NO.(s): 2809-21-4

VALUE(S) ADDED

8-08-83

BASIS (Human/Aquatic): Human

FACT SHEET REVISED

9-6-85

WATER CLASSIFICATION: AA; AA-s; A; A-s

VALUE(S) REMOVED

STANDARD: 50 ug/l

Note E

REMARKS:

SUMMARY INFORMATION:

Available toxicity information on 1-hydroxyethylidene-1,1-diphosphonic acid has been reviewed.^{1,2} Toxic effects of acute exposure to the compound in the diet of dogs include stomach and intestinal irritation, bloody emesis, diarrhea and loss of appetite. Rats exposed via the diet to subchronic doses showed stomach ulcers, hyperemia, and erosion of the glandular mucosal epithelium in the stomach of some animals. However, chronic exposure data are lacking. Insufficient data exist upon which to calculate a guideline based on chronic toxicity or aesthetic effects. The compound has not been adequately tested to determine its oncogenic potential.

STANDARD DERIVATION

Inadequate data base precludes the use of any derivation outlined in Section 701.3 through 701.7. Therefore the general guideline of 50 ug/l is recommended as the standard.

REFERENCES:

- (1) Nixon, G., et al., 1972, Preliminary safety assessment of disodium etidronate as an additive to experimental oral hygiene products, *Tox. Appl. Pharm.* 22, 661-671.
- (2) Trechsel, U., et al., 1977, Relation between bone mineralization, Ca absorption and plasma Ca in phosphonate-treated rats, *Am. J. Physiol.* 232(3), E298-E305.

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