西亚试剂® Xiya Reagent 说明书

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化 学 品 安 全 技 术 说 明 书

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## MSDS标题

URSOLIC ACID MSDS报告

## 产品标题

熊果酸;乌苏酸

## CAS号

77-52-1

## 化学品及企业标识

# PRODUCT NAME

URSOLIC ACID

# NFPA

| | |
|---|---|
| Flammability | 1 |
| Toxicity | 2 |
| Body Contact | 0 |
| Reactivity | 1 |
| Chronic | 2 |

SCALE: Min/Nil=0 Low=1 Moderate=2 High=3 Extreme=4

# PRODUCT USE

Tripterpene acid occuring in leaves and berries of Arctostaphylos uva- versi (L.) Spreng (bearberry), of Vaccinium macrocarpon Ait (cranberry), Rhododendron hymenanthes Makino, Ericaceae and in the protective wax- like coating of apples, pears, prunes and other fruits. Used as an emulsifying agent in pharmaceuticals, foods.

xiya

## SYNONYMS

C30-H48-O3, "3-beta-hydroxyurs-12-en-28-oic acid", "3-beta-hydroxyurs-12-en-28-oic acid", urson, prunol, micromerol, malol, "tri-terpene acid", sapinogen

## CANADIAN WHMIS SYMBOLS

None

## EMERGENCY OVERVIEW

## RISK

Harmful to aquatic organisms.

## POTENTIAL HEALTH EFFECTS

## ACUTE HEALTH EFFECTS

## SWALLOWED

Although ingestion is not thought to produce harmful effects, the material may still be damaging to the health of the individual following ingestion, especially where pre- existing organ (e.g. liver, kidney) damage is evident. Present definitions of harmful or toxic substances are generally based on doses producing mortality (death) rather than those producing morbidity (disease, ill-health). Gastrointestinal tract discomfort may produce nausea and vomiting. In an occupational setting however, ingestion of insignificant quantities is not thought to be cause for concern. Saponins (saponines and steroidal sapogenines) are weakly absorbed by the intestine and because of their detergent action, concentrate in the lipid layer of the cells of the gastric and intestinal epithelium. This results in cell damage and severe irritation of the gastrointestinal tract, characterised by burning of the mouth and stomach, cough, salivation and lachrymation, followed by nausea, vomiting, and diarrhoea. Severe fluid and electrolyte loss may also ensue. Reflexes via the autonomic nervous system may produce disturbances to heart function and circulatory system. Death may be the result of a shock reaction. Although saponins are generally poorly absorbed, local irritation of the mucous membranes may enhance their permeability as a result of damage to the intestinal wall. After absorption, systemic damage to red blood cells may produce severe haemolysis, causing anoxia and kidney failure. Humans generally do not suffer severe poisoning from saponins as endogenous cholestrin inactivates them so that only mucous membranes are involved. Because of this, saponins have been used in sneezing powders, emetics and cough syrups to facilitate expectoration. Most saponins are diuretic. In humans this effect disappears within a week following the neutralising action of cholestrin. Some saponins have been identified as potentially harmful to humans because they reduce serum cholesterol by preventing its re-adsorption after it has been excreted by the bile. It is hypothesised that the saponins

either bind with bile or cause bile salts to bind to the polysaccharides in dietary fibre. Either way the bile salts are unavailable to bind cholesterol.

## EYE

Although the material is not thought to be an irritant, direct contact with the eye may produce transient discomfort characterized by tearing or conjunctival redness (as with windburn).

## SKIN

The material is not thought to produce adverse health effects or skin irritation following contact (as classified using animal models). Nevertheless, good hygiene practice requires that exposure be kept to a minimum and that suitable gloves be used in an occupational setting.

## INHALED

Inhalation may produce health damage*. The material is not thought to produce respiratory irritation (as classified using animal models). Nevertheless inhalation of the material, especially for prolonged periods, may produce respiratory discomfort and occasionally, distress. Persons with impaired respiratory function, airway diseases and conditions such as emphysema or chronic bronchitis, may incur further disability if excessive concentrations of particulate are inhaled. Inhalation of saponin (saponin, sapogenin) dusts or aerosols may produce spasm, oedema of the larynx, chemical pneumonitis and pulmonary oedema. High concentrations may cause mucous membrane damage. Symptoms include burning sensation, coughing, wheezing, shortness of breath, headache and nausea.

## CHRONIC HEALTH EFFECTS

Principal routes of exposure are by accidental skin and eye contact andinhalation of generated dusts. Several instances of allergenicity resulting from contact with steroidal saponins (sapogenins, including phytosteroids and phyto-oestrogens) have been recorded. Severe irritation has been reported following dermal exposure to sapogenin-containing saps but confounding factors such as the presence of raphides (calcium oxalates) may be significant. Saponins (saponine, sapogenine) are extremely toxic if absorbed in the blood stream; they act by haemolysis (destruction of red blood cells) even at extreme dilution. Many saponins are phytooestrogenic. A common feature of the phytooestrogens is their striking similarity to 17beta-oestrodiol and the synthetic oestrogen, diethylstilboestrol. There is evidence that phytooestrogens may mediate oestrogen-like effects by direct interaction with the oestrogen receptor of cells. Although the hormonal activity of phytooestrogens is two to five orders of magnitude below that of oestrodiol, their high concentration in certain plants and their slower metabolic disposition, can lead to tissue levels exceeding those of endogenous oestrogens by a factor of a thousand or more.