

Sodium formaldehyde sulfoxylate is moderately toxic by ingestion, and when heated to decomposition it emits toxic fumes of sulfur dioxide and sodium oxide.<sup>(1)</sup>

LD<sub>50</sub> (mouse, oral): 4 g/kg<sup>(1)</sup>

LD<sub>50</sub> (rat, IP): >2 g/kg<sup>(2)</sup>

LD<sub>50</sub> (rat, oral): >2 g/kg<sup>(2)</sup>

### 15 Handling Precautions

Observe normal precautions appropriate to the circumstances and quantity of the material handled. May cause irritation of the eyes, skin, respiratory tract and digestive tract; the use of eye protection, a respirator and gloves is strongly recommended.

### 16 Regulatory Status

Included in the FDA Inactive Ingredients Database (parenteral products up to 0.1% via the IM, IV, and SC routes).

### 17 Related Substances

Zinc formaldehyde sulfoxylate.

#### Zinc formaldehyde sulfoxylate

Empirical formula C<sub>2</sub>H<sub>6</sub>O<sub>6</sub>S<sub>2</sub>Zn

Molecular weight 256.5

CAS number [24887-06-7]

Comments Used as an additive in polymers and textiles. The EINECS number is 246-515-6.

### 18 Comments

Sodium formaldehyde sulfoxylate has been investigated as an antidote to mercury poisoning, but is considered less effective than dimercaprol (British anti-lewisite (BAL)) and other treatments.<sup>(3,4)</sup> It

is also used as an industrial bleach. It is used in chemical synthesis as a nucleophilic agent in the preparation of sulfones. The empirical formula and molecular weight are also given as CH<sub>4</sub>O<sub>3</sub>SNa and 119.1, respectively.<sup>(1)</sup>

A specification for sodium formaldehyde sulfoxylate is included in the *Japanese Pharmaceutical Excipients* (JPE).<sup>(5)</sup>

The EINECS number for sodium formaldehyde sulfoxylate is 205-739-4. The PubChem Compound ID for sodium formaldehyde sulfoxylate is 23725019.

### 19 Specific References

- 1 Lewis RJ, ed. *Sax's Dangerous Properties of Industrial Materials*, 12th edn. New York: Wiley, 2012: 2218.
- 2 Sigma-Aldrich. Material safety data sheet: Sodium formaldehyde sulfoxylate, version 5.2, 23 May 2014.
- 3 Stocken LA. British anti-lewisite as an antidote for acute mercury poisoning. *Biochem J* 1947; **41**: 358–360.
- 4 Lehotzky K. Protection by spironolactone and different antidotes against acute organic mercury poisoning of rats. *Int Arch Occup Environ Health* 1974; **33**: 329–334.
- 5 Japan Pharmaceutical Excipients Council. *Japanese Pharmaceutical Excipients 2004*. Tokyo: Yakuji Nippo, 2004: 796-798.

### 20 General References

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### 21 Author

RC Moreton.

### 22 Date of Revision

4 May 2017.

## Sodium Hyaluronate

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### 1 Nonproprietary Names

BP: Sodium Hyaluronate

JP: Purified Sodium Hyaluronate

PhEur: Sodium Hyaluronate

### 2 Synonyms

Hyaluronan; hyaluronate sodium; natrii hyaluronas; RITA HA C-1-C.

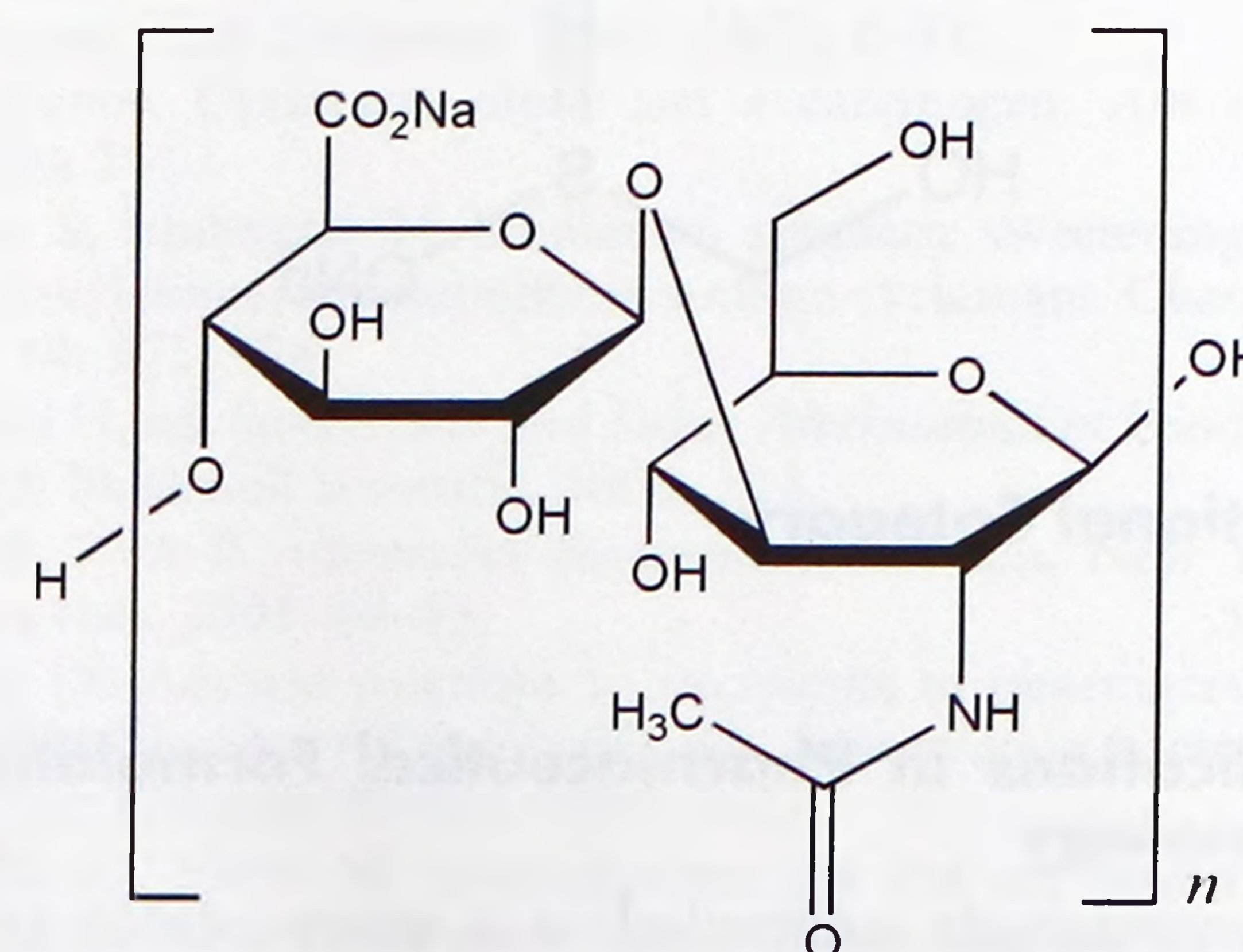
### 3 Chemical Name and CAS Registry Number

Sodium hyaluronate [9067-32-7]

### 4 Empirical Formula and Molecular Weight

(C<sub>14</sub>H<sub>20</sub>NO<sub>11</sub>Na)<sub>n</sub> (401.3)<sub>n</sub>

### 5 Structural Formula



### 6 Functional Category

Humectant; lubricant; modified-release agent.