

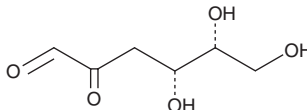
# PRODUCT INFORMATION



## 3-deoxy Galactosone

Item No. 16801

CAS Registry No.: 4134-97-8  
Formal Name: 3-deoxy-D-*threo*-hexos-2-ulose  
MF: C<sub>6</sub>H<sub>10</sub>O<sub>5</sub>  
FW: 162.1  
Purity: ≥95%  
UV/Vis.: λ<sub>max</sub>: 225, 280 nm  
Supplied as: A crystalline solid  
Storage: -20°C  
Stability: ≥4 years



Information represents the product specifications. Batch specific analytical results are provided on each certificate of analysis.

### Laboratory Procedures

3-deoxy Galactosone is supplied as a crystalline solid. A stock solution may be made by dissolving the 3-deoxy galactosone in the solvent of choice. 3-deoxy Galactosone is soluble in organic solvents such as ethanol, DMSO, and dimethyl formamide (DMF), which should be purged with an inert gas. The solubility of 3-deoxy galactosone in ethanol is approximately 1 mg/ml and approximately 20 mg/ml in DMSO and DMF.

Further dilutions of the stock solution into aqueous buffers or isotonic saline should be made prior to performing biological experiments. Ensure that the residual amount of organic solvent is insignificant, since organic solvents may have physiological effects at low concentrations. Organic solvent-free aqueous solutions of 3-deoxy galactosone can be prepared by directly dissolving the crystalline solid in aqueous buffers. The solubility of 3-deoxy galactosone in PBS, pH 7.2, is approximately 10 mg/ml. We do not recommend storing the aqueous solution for more than one day.

### Description

3-deoxy Galactosone is a 1,2-dicarbonyl compound originating from the degradation of galactose. It can be formed by Maillard or caramelization reactions.<sup>1</sup> 3-deoxy Galactosone has been detected in various food items, including milk, apple juice, and beer, as well as in heat-sterilized dialysis fluids.<sup>1,2</sup>

### References

1. Hellwig, M., Degen, J., and Henle, T. 3-deoxygalactosone, a "new" 1,2-dicarbonyl compound in milk products. *J. Agric. Food Chem.* **58**(19), 10752-10760 (2014).
2. Mittelmaier, S., Fünfroeken, M., Fenn, D., *et al.* 3-Deoxygalactosone, a new glucose degradation product in peritoneal dialysis fluids: Identification, quantification by HPLC/DAD/MSMS and its pathway of formation. *Anal. Bioanal. Chem.* **399**(4), 1689-1697 (2011).

#### WARNING

THIS PRODUCT IS FOR RESEARCH ONLY - NOT FOR HUMAN OR VETERINARY DIAGNOSTIC OR THERAPEUTIC USE.

#### SAFETY DATA

This material should be considered hazardous until further information becomes available. Do not ingest, inhale, get in eyes, on skin, or on clothing. Wash thoroughly after handling. Before use, the user must review the [complete](#) Safety Data Sheet, which has been sent via email to your institution.

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