

# PRODUCT INFORMATION

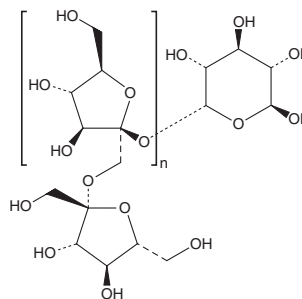


## Inulin

Item No. 19229

**CAS Registry No.:** 9005-80-5  
**Formal Name:** (2S,3S,4S,5R,6R)-6-(((2S,3S,4S,5R)-2-(((2R,3S,4S,5R)-3,4-dihydroxy-2,5-bis(hydroxymethyl)tetrahydrofuran-2-yl)oxy)methyl)-3,4-dihydroxy-5-(hydroxymethyl)tetrahydrofuran-2-yl)oxy)tetrahydro-2H-pyran-2,3,4,5-tetraol

**MF:**  $(C_6H_{10}O_5)_n$   
**Supplied as:** A crystalline solid  
**Storage:** 4°C  
**Stability:** ≥4 years  
**Item Origin:** Plant/*Helianthus tuberosus*



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

### Laboratory Procedures

Inulin is supplied as a crystalline solid. Inulin is sparingly soluble in aqueous solutions. To enhance aqueous solubility, dilute the organic solvent solution into aqueous buffers or isotonic saline. If performing biological experiments, ensure the residual amount of organic solvent is insignificant, since organic solvents may have physiological effects at low concentrations. We do not recommend storing the aqueous solution for more than one day.

### Description

Inulin is a heterogeneous collection of fructose polymers produced by plants of the *Compositae* family, most notably by chicory root.<sup>1</sup> It belongs to a class of dietary fibers known as fructans and functions as a natural storage carbohydrate.<sup>1</sup> Due to the specific structure of its  $\beta(2,1)$  linkages, inulin cannot be hydrolyzed by the endogenous secretions of the human digestive system, although it can be metabolized by microbial flora of the colon.<sup>1</sup> As such, in terms of dietary nutrition, inulin is considered a form of soluble fiber and is sometimes categorized as a prebiotic.<sup>1,2</sup> It is frequently used to measure kidney function via glomerular filtration rate, since it is neither secreted nor reabsorbed at the nephron.<sup>3</sup>

### References

1. Dyssele, P. and Hoffem, D. Inulin, an alternative dietary fibre. Properties and quantitative analysis. *Eur. J. Clin. Nutr.* **49(Suppl. 3)**, S145-S152 (1995).
2. Hofer, K. and Jenewein, D. Enzymatic determination of inulin in food and dietary supplements. *Eur. Food Res. Technol.* **209**, 423-427 (1999).
3. Berg, U.B. Differences in decline in GFR with age between males and females. Reference data on clearances of inulin and PAH in potential kidney donors. *Nephrol. Dial. Transplant.* **21(9)**, 2577-2582 (2006).

#### 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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