

# Product Information

– for professionals only –



# Serin

## In Short

- **Serin** is a Food for Special Medical Purposes (FSMP) for use in the dietary management of rare metabolic disorders, e.g. GRIN2B-associated Encephalopathy or Serine Deficiency Disorders, when supplementation with L-Serine is indicated
- L-Serine – in powder form
- sweet-tasting powder
- suitable for tube feeding
- 100 g tin

## Product Profile

**Serin** is highly concentrated L-Serine in powder form.

**Serin** is not fortified with micro-nutrients.

## Administration

**Serin** should always be taken along with other foods. **Serin** is also suitable for tube feeding.

## Preparation

**Serin** may be stirred into liquids, such as water, (diluted) juice or milk, it should be drunk quickly. **Serin** may also be prepared with fruit puree and other foods.

Always weigh the amount of **Serin** needed. Always prepare freshly.

**Function** **Serin** is suitable for prevention or correction of disease related L-Serine deficiencies.

**Indication** **Serin** is used for the dietary management of rare metabolic disorders, when supplementation with L-Serine is indicated. These include Serine Deficiency Disorders (1), e.g.

- 3-phosphoglycerate dehydrogenase deficiency
- L-serine biosynthesis phosphoserine aminotransferase deficiency (rare)
- phosphoserine phosphatase deficiency (very rare).

The review by Hoytema van Konijnenburg (2) also mentions the mitochondrial aspartate aminotransferase deficiency and seryl-tRNA synthetase 1 deficiency as indications. Likewise, L-serine is used for the dietary management of GRIN2B-

associated Encephalopathy, a congenital neurotransmitter disorder caused by NMDA receptor deficiency (ionotropic glutamate receptor NMDA type subunit 2B dysregulation).

**Dosage** The daily dosage depends on age, body weight and individual medical condition and is, as the right time for the daily intake, determined under medical supervision.

**Important Notice** Must only be used under medical supervision. Not for use as a sole source of nutrition. For enteral use only. Only for people with rare metabolic disorders, e.g. GRIN2B-associated Encephalopathy or Serine Deficiency Disorders. **Serin** is not suitable for infants in the first year of life.

## References:

- 1) van der Crabben, SN et al. (2013) An update on serine deficiency disorders. J Inherit Metab Dis 36:613–619. doi.org/10.1007/s10545-013-9592-4.
- 2) van Konijnenburg et al. (2021) Treatable inherited metabolic disorders causing intellectual disability: 2021 review and digital app; Orphanet Journal of Rare Diseases 16(1):170. doi: 10.1186/s13023-021-01727-2.

**NUTRITION INFORMATION**

Serin 100 g

<b>Energy</b>	<b>kJ</b>	<b>1417</b>
	<b>kcal</b>	<b>333</b>
<b>Fat</b>	<b>g</b>	<b>0</b>
of which saturates	g	0
<b>Carbohydrate</b>	<b>g</b>	<b>0</b>
of which sugars	g	0
<b>Protein eqv.</b>	<b>g</b>	<b>83</b>
of which L-Serine	g	100
<b>Salt</b>	<b>g</b>	<b>0</b>

**INGREDIENTS**

L-serine.

Delivery Unit	tin 100 g
Article Number	xx-001-98014
Delivery to	Pharmacies, clinics
Storage	Store in a cool, dry place.