

## CERTIFICATE OF ANALYSIS

### General Information

Product:	Glycoin® natural
Product No.	10005
Date of manufacture:	2023-06-09
Lot No.:	23G0601
Next retest:	2026-06-30

Analysis Item	Unit	Standard Data	Result(s)
Appearance	-	transparent, mainly colourless liquid	complies
Identity (HPLC)	-	complies	complies
Odour	-	characteristic	complies
2-O- $\alpha$ -D-glucopyranosylglycerine (HPLC)	[% (w/w)]	$\geq 50$	50.4
Glucose (HPLC)	[% (w/w)]	$\leq 3$	< 3
Fructose (HPLC)	[% (w/w)]	$\leq 5$	< 5
1-O- $\alpha$ -D-glucopyranosylglycerine (HPLC)	[% (w/w)]	$\leq 7$	< 7
Colour (2% in water)	Hazen	$\leq 25$	< 25
pH-value (2% in water)	-	4.0 - 7.5	5.43

### Heavy Metals

Cadmium (Cd)	[ppm]	$\leq 2$	< 2
Lead (Pb)	[ppm]	$\leq 5$	< 5
Arsenic (As)	[ppm]	$\leq 2$	< 2
Mercury (Hg)	[ppm]	$\leq 1$	< 1
Cobalt (Co)	[ppm]	$\leq 3$	< 3
Vanadium (V)	[ppm]	$\leq 1$	< 1
Nickel (Ni)	[ppm]	$\leq 5$	< 5

### Microbiological Analysis

TAMC	[CFU/g]	$\leq 100$	< 100
TYMC	[CFU/g]	$\leq 100$	< 100
<i>Candida albicans</i>	-	absent in 1 g	absent
<i>E.coli</i>	-	absent in 1 g	absent
<i>Pseudomonas aeruginosa</i>	-	absent in 1 g	absent
<i>Staphylococcus aureus</i>	-	absent in 1 g	absent
<i>Salmonella species</i>	-	absent in 10 g	absent
Endotoxins	[EU/g]	$\leq 100$	< 100

### Comments: -

Date: 2023-06-22

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released by: Christoph Boselli

Head of quality control