

## CERTIFICATE OF ANALYSIS

<b>Product Name</b>	Hawthorn Berry
<b>Botanical Latin Name</b>	<i>Crataegus monogyna</i> Jacq.; <i>C. oxyacantha</i> sensu Pojark; <i>C. laevigata</i> (Poir.) DC
<b>Country of Origin</b>	Uzbekistan
<b>Part of Plant</b>	Berry
<b>Fraction</b>	Whole
<b>Crop Year</b>	January 2024
<b>Shelf Life</b>	January 2028

### Organoleptic Specification

Analysis Item	Specification	Result
Colour	Depends on species; yellowish-orange / brownish-red to dark brown and black	Complies
Odour	Very weak, almost absent	Complies
Flavour	Sweet, sour	Complies

### Physical & Chemical Requirements

Analysis Item	Specification	Result
Moisture content	NMT 12.0% (EP 8.0 2.2.32)	9.89%
Total ash	NMT 5.0% (EP 8.0 2.4.16)	3.62%
Acid insoluble ash	NMT 1.0% (EP 8.0 2.8.1)	0.43%
Flavonoids as hyperoside	NLT 0.06% (TP XII, Belit., cr. 32)	0.09%
Extraneous matter (mineral)	NMT 0.5% (EP 8.0 2.8.2)	0.01%
Extraneous matter (organic)	NMT 1.0% (EP 8.0 2.8.2)	0.00%

### Contaminants

Analysis Item	Specification	Result
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Lead (Pb)	NMT 0.25 mg/kg (Reg. (EU) 2023/915; EP 8.0 2.4.27)	Complies
Cadmium (Cd)	NMT 0.075 mg/kg (Reg. (EU) 2023/915; EP 8.0 2.4.27)	Complies
TA (tropane alkaloids)	NMT 25 µg/kg (Reg. (EU) 2023/915; LC-MS/MS)	Complies
PA (pyrrolizidine alkaloids)	NMT 400 µg/kg (Reg. (EU) 2023/915; LC-MS/MS)	Complies
PAH: Benzo[a]pyrene	NMT 10 µg/kg (Reg. (EU) 2023/915; GC-MS)	Complies
Sum of PAH4	NMT 50 µg/kg (Reg. (EU) 2023/915; GC-MS)	Complies
Aflatoxin B1	NMT 5 µg/kg (Reg. (EU) 2023/915; PN-EN 14123:2008)	Complies
Sum of aflatoxins (B1, B2, G1, G2)	NMT 10 µg/kg (Reg. (EU) 2023/915; PN-EN 14123:2008)	Complies
Ochratoxin A	NMT 2 µg/kg (Reg. (EU) 2023/915; PN-EN 14132:2010)	Complies
Pesticide MRLs	Complies with Reg. (EC) No 396/2005 (HPLC)	Complies

#### Impurities / Statements

<b>Impurities</b>	Product free from metallic, magnetic adulterants, wood, glass particles, sand.
<b>Infestation</b>	Product free from living insects; practically free from molds, dead insects, insect fragments and rodent contamination.
<b>GMO Statement</b>	Does not contain and is not made from GMOs (Reg. (EC) 1829/2003).
<b>Allergen Information</b>	No allergenic foods or derivatives listed in Reg. (EU) 1169/2011 were used to process the product.
<b>Treatment</b>	Not treated with ionizing radiation (Directive 1999/2/EC).

#### Microbiological Parameters

Analysis Item	Specification	Result
Total plate count, CFU/g	10 <sup>6</sup> (EP 8.0 2.6.12)	1.0×10 <sup>5</sup>
Salmonella	Negative in 25 g (EP 8.0 2.6.31)	Negative in 25 g
Yeasts & molds, CFU/g	≤ 1.0×10 <sup>3</sup> (EP 8.0 2.6.12)	1.0×10 <sup>4</sup>

E. coli / g	≤ 10 (EP 8.0 2.6.31)	< 10
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**Packaging & Storage**

<b>Shelf Life</b>	48 months (in original packing and proper storage).
<b>Labeling</b>	Product name, origin, net weight, gross weight, expiry date, batch no.

Base Bulk