

ISO 24381:2023-11 (E)

Bee propolis - Specifications

Contents		Page
Foreword		iv
Introduction		v
1	Scope	1
2	Normative references	1
3	Terms and definitions	1
4	Requirements	3
4.1	Classification of raw propolis types	3
4.1.1	Temperate, Mediterranean and boreal, brown, <i>Populus</i> spp. propolis	3
4.1.2	Tropical, green, <i>Baccharis dracunculifolia</i> propolis	3
4.1.3	Tropical, red, <i>Dalbergia</i> and <i>Clusia</i> propolis	3
4.1.4	Other types of propolis	3
4.2	Physical and chemical requirements	3
4.3	Traceability requirements	4
5	Test methods	4
5.1	Reagents	4
5.2	Sample collection	5
5.3	Sample preparation	5
5.4	Test methods for physical and chemical requirements	5
6	Packaging, marking, labelling, storage and transportation	5
6.1	Packaging	5
6.2	Marking (label and/or certificate)	5
6.3	Labelling	5
6.4	Storage and transportation	6
Annex A (normative)	Ethanol extractables of raw propolis (as dry matter)	7
Annex B (normative)	Loss on drying determination	9
Annex C (normative)	Ash content in raw propolis	11
Annex D (normative)	Petroleum ether extractables of raw propolis (as dry matter)	13
Annex E (normative)	Total phenolic content	15
Annex F (Normative)	Total flavonoids content (aluminium chloride method)	18
Annex G (Normative)	Total flavonoids content (polyamide method)	20
Annex H (normative)	Chemical characterization of polyphenols in poplar propolis -- HPLC/MS	24
Annex I (normative)	Chemical characterization of polyphenols in green propolis -- HPLC/ PDA	38
Annex J (normative)	Chemical characterization of polyphenols in red propolis by HPLC- PDA and HPLC-MS	43
Annex K (normative)	Determination of antioxidant capacity by DPPH	47