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**NATIONAL STANDARD OF THE
PEOPLE'S REPUBLIC OF CHINA**

GB/T 23196-2008

**Determination of ferulic acid content in propolis - HPLC-UV
method**

蜂胶中阿魏酸含量的测定方法 液相色谱-紫外检测法

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Foreword

This standard Annex A, Annex B and Annex C is informative appendix. This standard is proposed and managed by China Federation of Supply and Marketing Cooperatives. This standard was drafted. Australian Medicare Ling Pharmaceutical Co., Ltd. in Hangzhou, China Federation of Supply and Marketing Cooperatives bee products Standardization Technical Committee Council, Chinese Academy of Agricultural Sciences Institute of bees, CIQ Jiangsu, Nanjing University, Jiangsu Laoshan biotechnology company. The main drafters of this standard. Yuying Min, Hu Xiaolan, Zhu Jinliang, Xu Chengzhi, Zhou Jinhui, Li Gonghai, Chen Kun, Hong vibration training. Determination of ferulic acid in propolis LC - UV detection method

1 Scope

GB/T 23196-2008 is the Chinese national standard on determination of ferulic acid content in propolis - hplc-uv method, in the field of agriculture. The /T suffix marks it as a recommended standard: it is not compulsory by itself, but it becomes binding as soon as a contract, a tender or a customer specification calls it up - which in practice is how most foreign buyers meet it. It was issued on 31 December 2008 by the General Administration of Quality Supervision, Inspection and Quarantine of the People's Republic of China; Standardization Administration of China, and has been in force since 1 June 2009. Classification: ICS 65.140, CCS B47. This page is published from the official record of the standard held by the Chinese standards administration: the identification, the dates, the classification and the issuing body are taken from there. The clause text, the tables and the numeric limits are in the document itself, which is delivered complete in English translation.

This standard specifies the liquid chromatographic method propolis ferulic acid. This standard applies to the determination of ferulic acid in propolis. The detection limit of this standard. 4µg/kg.

2 Normative references

The following documents contain provisions which, through reference in this standard and

become the standard terms. For dated references, subsequent Amendments (not including errata content) or revisions do not apply to this standard, however, encourage the parties to the agreement are based on research Whether the latest versions of these documents. For undated reference documents, the latest versions apply to this standard.

GB/T 6682 analytical laboratory use specifications and test methods (GB/T 6682-2008, ISO 3696. 1987, MOD) Principle

3 Propolis ferulic acid with methanol ultrasonic extraction, precipitation, centrifugation, and then the supernatant was 0.45 μ m membrane filtration by reverse phase column After separation by liquid chromatography - ultraviolet detector measurement, external standard, based on the retention times and peak areas for qualitative and quantitative.

4 Reagents and materials

Unless otherwise specified, the reagents used were of analytical grade; water as a water GB/T 6682 provisions (distilled water or equivalent purity water); not When specified with a solvent which formulated refers to an aqueous solution.

4.1 Methanol. chromatographically pure. 4.2 0.085% phosphoric acid solution (volume fraction). amount of 0.85mL phosphoric acid, water volume to 1000mL, through 0.45 μ m membrane filter.

4.3 acetonitrile. chromatography. 4.4 70% methanol (by volume). Measure 70mL of analytical grade methanol was added 30mL of water were mixed uniformly.

4.5 ferulic acid standard substance. purity $\geq$ 99%.

4.6 ferulic acid standard stock solution (200.0 μ g/mL). Weigh accurately 10.0mg (accurate to 0.1mg) ferulic acid standard substance (4.5) In 50mL brown volumetric flask, add 70% methanol (4.4) to dissolve and dilute to volume, and mix, this solution can be at a temperature lower than 4 °C ice Box refrigerated for two months.

4.7 ferulic acid standard solution. Pipette appropriate amount of ferulic acid standard stock solution (4.6) 1mL, 2.5mL, 5.0mL, 10.0mL, 20.0mL, 40.0mL, 80.0mL to 100mL volumetric flask, with 70% methanol (4.4) to the mark, dubbed 2.0 μ g/mL, 5.0 μ g/mL, 10.0 μ g/mL, 20.0 μ g/mL, 40.0 μ g/mL, 80.0 μ g/mL, 160.0 μ g/mL working standard Solution, now with the current.

5 Instruments and equipment

5.1 liquid chromatograph. equipped with a UV detector.

5.2 Analytical balance. accurate to 0.1mg.

5.3 membrane filter (polyvinylidene fluoride microporous membrane type F, 25mm).

0.45μm.

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