CORN SMUT
FOR HOMOEOPATHIC PREPARATIONS

USTILAGO MAIDIS
FOR HOMOEOPATHIC PREPARATIONS

Ustilago maidis ad praeparationes homoeopathicas

DEFINITION

Blackish, vesicular mass composed of parasite-infected maize flowers (corn flowers) by *Ustilago maidis* (DC.) Corda (= *Ustilago zeae* (Beckm.) Unger).

CHARACTERS

Characteristic musty odour.

Macroscopic and microscopic characters described under identification tests A and B.

IDENTIFICATION

A. Blackish, vesicular mass reaching a nut size composed of the hypertrophied and bloated wall of the maize flower carpels and when mature, releasing a black powder consisting of the spores of *Ustilago maidis* (DC.) Corda.

B. Examine the powder under a microscope, using *chloral hydrate solution R*. Very numerous, light brown spores, rounded to ovoid, sometimes slightly elliptical or irregular, about 10 µm long and 8 µm large with thinly echinulate cell-wall, measuring about 0.5 µm thick; some vesicle fragments composed of cells with thin, cellulose-wall, elongated to rectangular; scarce fragments of vessels with spiralled or annular decorations, about 20 µm in diameter.

TESTS

Loss on drying (*2.2.32*): minimum 35.0 per cent, determined on 5.0 g of finely-cut drug, by drying in an oven at 105 °C for 2 h.

STOCK

DEFINITION

Corn smut mother tincture complies with the requirements of the general technique for the preparation of mother tinctures (see *Homoeopathic Preparations* (*1038*) and French

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The General Chapters and General Monographs of the European Pharmacopoeia and Preamble of the French Pharmacopoeia apply.

Pharmacopoeia Authority Supplement). The mother tincture is prepared with ethanol (65 per cent *V/V*), using the blackish, vesicular mass composed of parasite-infected maize flowers (corn flower) by *Ustilago maidis* (DC.) Corda (= *Ustilago zeae* (Beckm.) Unger).

CHARACTERS

Appareance: brownish-yellow liquid.

IDENTIFICATION

Thin-layer chromatography (*2.2.27*).

Test solution. Mother tincture.

Reference solution. Dissolve 10 mg of *threonine R* and 10 mg of *leucine R* in 10 mL of *ethanol* (50 per cent *V/V*) *R.*

Plate: *TLC silica gel plate R.*

Mobile phase: *water R, ethanol* (*96 per cent*) *R, glacial acetic acid R, methylene chloride R* (8:12:32:60 *V/V/V/V*).

Application: 10 µL of reference solution, 25 µL of test solution, as bands.

Development: over a path of 10 cm.

Drying: in air.

Detection: spray with *ninhydrin solution R* and heat at 100-105 °C for 5-10 min. Examine in daylight.

Results: see below the sequence of zones present in the chromatograms obtained with the reference solution and the test solution. Furthermore other faint zones may be present in the chromatogram obtained with the test solution.

The General Chapters and General Monographs of the European Pharmacopoeia and Preamble of the French Pharmacopoeia apply.

Top of the plate	
Leucine: a pink zone	A pink zone (leucine)
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	A pink zone
	A pink zone
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Threonine: a pink zone	A pink zone (threonine)
	A purplish-pink zone
	A pink zone (faint)
Reference solution	**Test solution**

TESTS

Ethanol (*2.9.10*): 60 per cent *V/V* to 70 per cent *V/V.*

Dry residue (*2.8.16*): minimum 0.8 per cent *m/m*.

The General Chapters and General Monographs of the European Pharmacopoeia and Preamble of the French Pharmacopoeia apply.