60260 Myrrh and Bdellium

(from "Pitman's Common Commodities and Industries, GUMS & RESINS – by Ernest J. Parry, London; Printed by Sir Isaac Pitman & Sons, Ltd, Bath, England, v-(1465E))

The true myrrh of commerce is that known as Herabol myrrh, a gum resin which is derived from various species of Balsamodendron and Commiphora. Bisabol myrrh is quite different in flavour and odour from Herabol myrrh, and appears to be derived principally from Balsamea erythrea.

Myrrh is a fragrant gum resin, varying in colour from pale yellow to almost black. It usually arrives in chests of very mixed qualities, which are either purchased as such ("sorts") or are picked and graded into different qualities. It is found in small masses, from the size of a pea to that of a chestnut, soft when fresh, but becoming hard on keeping. It is used to some extent in medicine, and largely in the manufacture of toilet preparations, perfumery and incense, as its odour is particularly fragrant. Bisabol myrrh is used in the manufacture of Chinese Joss sticks.

Myrrh, at one time, usually reached this country via Turkey, but for some years past it has been sent direct to London from India, Arabia and Somaliland. The only adulterants met with, except in rare occasions, are earthy matter and bdellium, or – in the case of Herabol myrrh – the Bisabol variety.

Herabol myrrh may be identified by the following reaction. About ten grains of the powdered gum resin are shaken for about ten minutes with 10 cc. of ether. The liquid is then filtered and 2 cc. of the filtrate are evaporated on a water bath in a porcelain capsule. The capsule containing the dry residue is then inverted over another containing strong nitric acid, so that the residue may come into contact with the fumes. A fine violet coloration results. Bisabol myrrh does not give this coloration.

A good sample of myrrh will contain from 30 to 40 per cent. of resin soluble in alcohol. According to Tucholka, Bisabol myrrh has the following composition –

Gum soluble in water	=	22.1 %
Gum soluble in alkali	=	29.85 %
Resin	=	21.5 %
Ethereal oil	=	7.8 %
Water	=	3.17 %
Insoluble vegetable matter	=	13.4 %

Genuine myrrh only yields about 5 to 8 per cent. to petroleum ether. The following are analytical values obtained by Kremel:

	Soluble in alcohol	Acid No.	Ester No.
Herabol	39.5 %	64	95
Herabol	42 %	60.2	116.5
Herabol	23.9 %	70.3	145.8
Bisabol	30.7 %	42.1	130.8

The essential oil obtained by distilling the gum resin with steam is very aromatic, but rarely seen in commerce.

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Bdellium, which resembles myrrh a good deal, is found as African bdellium, and as East Indian bdellium. It is obtained from various species of Commiphora and Balsamodendron. It comes into commerce in larger pieces than myrrh, and is usually very dirty. Its value lies in its somewhat aromatic properties. Bdellium does not give the violet coloration with nitric acid described above, so that it can be distinguished from myrrh by this means.

Dietrich has examined a number of samples and gives the following results:

	Acid value	Ester value
African	12.8	70
African	14.4	69.3
African	9.7	96.4
African	1.9	95.6
African	19.2	90.7
Indian	35.7	46.8
Indian	27.2	48.5

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