

# GUM GHATTI

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## SYNONYMS

Indian gum, ghatti gum, gum ghati

## DEFINITION

A dried gummy exudation obtained from *Anogeissus latifolia* Wall. (family *Combretaceae*) consisting mainly of a calcium salt (may on occasions occur as a magnesium salt) of high molecular weight polysaccharide which on hydrolysis yields arabinose, galactose, mannose, xylose and glucuronic acid.

C.A.S. number

9000-28-6

Formula weight

Approximately 90% of the product is water soluble, and this portion has a molecular weight of about 12,000 as determined by osmotic pressure measurements.

## DESCRIPTION

The unground product occurs in amorphous tears of various sizes or in broken irregular pieces; light to dark brown; available commercially also in the form of grey to reddish-grey powder; little or no odour. Items of commerce may contain extraneous materials such as pieces of bark which must be removed before use in food.

**FUNCTIONAL USES** Thickening agent, stabilizer

## CHARACTERISTICS

### IDENTIFICATION

Solubility (Vol. 4)

When 1 g is dispersed in 5 ml of water it forms a viscous, adhesive mucilage; insoluble in ethanol

Gum constituents (Vol. 4)

Proceed as directed under *Gum Constituents Identification* using the following as reference standards: arabinose, galactose, mannose, glucuronic acid and xylose. Arabinose, mannose, glucuronic acid and xylose should be present.

Optical rotation

A 1 in 50 solution of the sample filtered through diatomaceous earth is levorotatory

Precipitate formation

To 10 ml of 1 in 100 solution of the sample (filter through diatomaceous earth if necessary) add 1 ml of Million's TS. A fine precipitate is formed. To 5 ml of 1 in 100 solution of the sample (filter through diatomaceous earth if necessary) add 0.2 ml of dilute lead subacetate TS. A small or no precipitate is formed, but an opaque flocculent precipitate is produced upon the further addition of 0.5 ml of ammonia TS.

### PURITY

Loss on drying (Vol. 4)

Not more than 14% (105°, 5 h)

Total ash (Vol. 4) Not more than 6%

Acid insoluble ash (Vol. 4) Not more than 1.75%

Microbiological criteria  
(Vol. 4) *Salmonella* spp.: Negative per test  
*E. coli*; Negative in 1 g

Lead (Vol. 4) Not more than 2 mg/kg  
Determine using an atomic absorption technique appropriate to the specified level. The selection of sample size and method of sample preparation may be based on the principles of the method described in Volume 4, "Instrumental Methods."