Herbal Pharmacology

Mucilages, Tannins, Anthraquinones

Class Abstract

Mucilages

Mills&Bone 1st ed. P.26

Eshun, Kojo, and Qian He. "Aloe vera: a valuable ingredient for the food, pharmaceutical and cosmetic industries—a review." Critical reviews in food science and nutrition 44.2 (2004): 91-96.


\[ \text{Guar gum} \]

\[ \text{Xanthan gum} \]

KEY POINTS: demulcent, soothe tissue, trap/slow sugars and cholesterol entry, poorly absorbed but may have reflex action in other mucous membranes, prebiotic

Extraction: water. Heat and ethanol (above 50%) may damage

Areas of action: mostly topical

Pharmacokinetics: form gels with water in GI tract, excreted through GI tract

Representative species: Aloe, Acacia, Althaea, Zea, Ulmus, Symphytum, Linum
Tannins:

Mills & Bone, 1st ed. p.34


KEY POINTS: astringent, styptic, bind protein, tone tissue, eventually denature tissue, can have antimicrobial action once modified in GI tract

Extraction: water. Heat will speed extraction. Long-term hot (simmering) water fastest way

Areas of action: mostly topical

Pharmacokinetics: Mills & Bone 1st ed. P.68. Complex with protein early, then hydrolyzed / modified by small intestine flora, ongoing decomposition / modification in colon, excreted out GI tract

Representative species: Quercus, Rubus, Camellia
**Anthraquinones**

*Mills & Bone, 1st ed. p.48*


![Aloe-Emodin](image)

**KEY POINTS:** laxative, can cause spasmodic colonic contraction, 8h to reach colon, can be habit-forming, have antimicrobial and antitumor effects (GI)

**Extraction:** water. Heat is safe, speeds extraction.

**Areas of action:** mostly topical, colonic mucosa

**Pharmacokinetics:** Mills & Bone 1st ed. P.62. Often exist as glycosides in plants, de-glycosylated in colon by gut flora, act on local tissue to stimulate peristalsis

**Representative species:** Aloe, Rheum, Cascara, Cassia, Rubia