

Bitter principles are a diverse group of non-alkaloid, non-glycoside natural products characterized by their bitter taste. Traditionally used as appetite stimulants before meals, they encompass various chemical classes including phenolics, lactones, furanochromones, and furanocoumarins. Examples include humulone and lupulone (hops), with sedative effects; santonin (*Artemisia cina*), an effective anthelmintic against roundworms; artemisinin (*Artemisia annua*), a potent antimalarial active against chloroquine-resistant strains and effective against cerebral malaria due to high lipid solubility; and elephantopin (*Elephantopus elatus*), exhibiting antitumor activity (e.g., against leukemia). Santonin's chemical test involves a violet-red color change with alcoholic KOH. Artemisinin's antimalarial activity .relies on its endoperoxide moiety