

caffeine, up to 0.1% theobromine, 0.3 to 0.4% D-catechin, 0.25% betaine, 6.7% protein, 2.9% sugar, 34% starch, 3% gum, 0.5% fat, 29% cellulose, and 12% water.³³

Toxicity — Caffeine in large doses is reported to be carcinogenic, mutagenic, and teratogenic.²⁹ Caffeine is also viricidal, suppressing the growth of polio, influenza, herpes simplex, and vaccinia viruses, but not Japanese encephalitis virus, Newcastle disease, virus, and type 2 adenovirus. In 1978, an FDA advisory panel concluded that caffeine, as it is added to cola soft drinks, should be subject to a more restrictive regulatory approach. Removal of caffeine from the GRAS list “was urged”.¹⁴¹