

# ***HUMIC ACID***

---

**THE EARLIEST KNOWN CHINESE  
MEDICINE REFERENCE**



***Laub BioChemicals Corporation  
1401 Quail St., Suite 121  
Newport Beach, CA 92660***

## ***Honey, Mud, Maggots, and Other Medical Marvels***

**R. Root-Bernstein and M. Root-Bernstein**

**Boston: Mariner Press, 1998, Ch. 5**

Clays have also been important as medicines; the premodern Chinese may hold the record for the number of distinct uses. The sixteenth-century Chinese physician Li Shih-chen, for example, listed sixty-one pharmacological uses for clays, muds, and other earths in his *Pen-ts'ao kang-mu*, treating conditions from malnutrition to infection to diarrhea. Most other cultures have had more limited medical uses for earths. The ancient Greeks used soil dug from the island of Samos to treat people who were vomiting blood. The tenth-century Persian physician Rhazes prescribed the white clay of Nishapur for nausea and vomiting, and for centuries the Sudanese have ingested a clay called tureba, which is rich in sodium bicarbonate, for indigestion. Some American Indian tribes similarly cured bellyaches with small amounts of clay.

Clays are still being used as medicines today. The Toba-Batak of Sumatra claim that eating clay stops the vomiting associated with morning sickness in pregnant women. Many Nigerian tribes prescribe local clays for morning sickness, intestinal parasites, diarrhea, and dysentery, as do peoples throughout Asia and Australia. And in Indonesia ampo is used to cure nutritional disorders such as chlorosis, a form of anemia, and pica, the craving and eating of unnatural substances in general. From a Westerner's perspective, this last remedy is like treating an overindulgence in beer by substituting wine, since eating clay instead of mortar or charcoal, as occurs in pica, hardly seems an improvement. Yet because ampo is culturally accepted by the Indonesians, while other forms of pica are not, it is deemed expedient.

Both the Chinese and the Europeans also used medicinal clays to counteract the effects of poison. Terra sigillata, for example, was used to treat stomachaches due to illness as well as to ill will. Modern analyses of the clay banks from which terra sigillata and other "sealed earths" were produced show that they would in fact have been effective against many poisons, including those produced by bacteria in the gut. Clays have the ability to bind up materials that are ionized, or electrically charged, as many poisons are, especially those containing metals such as mercury or lead. In binding the poison, the clay releases an equal number of ions in a process called cation exchange. The cation-exchange capacity becomes a measure of how much of a particular poison the clay can adsorb.... Forty years ago at least one pharmacologist even suggested that clays or synthetic versions called cation-exchange resins be used in preference to charcoal and milk as household antidotes for heavy-metal poisons.

## Li Shih-chen, 1518-1593

Chinese  
medicine  
seems to  
have

reached its peak during the Ming dynasty (1368-1644) when Li Shih-chen wrote his *Pen ts'ao kang mu* (*The Great Herbal*). This great pharmacopoeia, which summarizes what was known of herbal medicine up to the late 16th century, describes in detail more than 1800 plants, animal substances, minerals, and metals, along with their medicinal properties and applications. Li Shih-chen was 35 years old when he began to compile his *Pen ts'ao kang mu*. He took 27 years to finish it.

---

The portraits from Ch'en Hsueh-lou, *Chung-kuo li tai ming i t'u chiu* (*Biographies and Portraits of Chinese Famous Doctors in Past Dynasties*), Nan-ching, 1987.

