

**Actions:** Antibacterial, antimicrobial, antiseptic, antiviral, antifungal, anthelmintic, antiparasitic. Of all herbs, it is perhaps the only true "antibiotic," the literal meaning of which is "antilife."

**Active against:** GSE is active against a very large number of microorganisms. Most studies on GSE have been *in vitro*, that is, in laboratory trials, *not* with human beings. *In vitro* activity is not always a reliable indicator of *in vivo* action by herbal medicines. There have been few clinical trials using GSE that I have been able to find. However, GSE has been found to be effective in cleaning hospital equipment, swimming pools, drinking water supplies, and in veterinary practice. I have used it effectively in treatment of *Helicobacter pylori*, the organism that causes stomach ulceration. A brief listing of activity (by organism and disease; generally GSE is active against multiple species and strains): *Shigella*, *Staphylococcus*, *Pseudomonas aeruginosa*, *Giardia lamblia*, *Diplococcus pneumoniae*, *Haemophilus influenzae*, *Mycobacterium* spp. (causing tuberculosis), *Campylobacter*, *Candida albicans*, *Escherichia coli*, *Streptococcus*, *Salmonella*, *Klebsiella*, *Proteus*, *Cholera*, *Chlamydia trachomatis*, *Trichomonas vaginalis*, *Legionella pneumoniae*, *Helicobacter pylori*, herpes simplex 1, influenza A2, measles, and many others, including both gram-positive and gram-negative bacteria. One study showed that of 794 bacterial strains and 93 fungal strains, a commercial preparation of grapefruit seed extract was effective against 249 *Staphylococcus* species and *S. aureus* strains, 86 *Streptococcus* species, 232 enterococcus species, 77 *Enterobacter* species, 86 *E. coli* strains, 22 *Klebsiella* species, 18 *Proteus* species, 77 yeast fungi, and 22 mold fungi strains.

### About Grapefruit Seed Extract

Grapefruit seed extract (GSE) and garlic are the two most powerful broad-spectrum antibiotics available for use. In descending degrees of potency, they are followed by eucalyptus, juniper, usnea, cryptolepis, and wormwood. GSE also has broad-spectrum activity against yeasts, fungi, and many other organisms, surpassing garlic's range by a considerable margin. Furthermore, the broad activity of GSE is available from minute doses of the extract, whereas garlic must be taken in relatively large doses to be equivalently effective as a straight antibiotic.