



Tagetes erecta's Biological Properties

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Tagetes erecta also known as the African marigold belongs to the asterace family, marigold leaves have a highly intense green color on the upper side, and pinnate leaves are arranged on opposite sides along the stem. The flowers and leaves are aromatic when crushed and also have biological properties.

Biological activities of *T. erecta*

Antibacterial

Leaf extract is useful to treat acne, skin rashes, and dermatitis. Marigold extracts have shown antibacterial activity against gram-negative bacteria

Antioxidant

The natural chemical ingredients in the essential oil have antioxidant qualities and are present in herbs and spices. The feed industry uses the bioactive ingredient found in marigolds to prevent oxidation and rancidity, and the methanolic extract protects human skin from photoaging by lowering oxidative damage.

Hepatoprotective

The extract from marigold flowers is used to cure liver injury because it reduces inflammation, necrosis, lymphocyte infiltration, and the growth of fibrous connective tissue in the liver.

Antifungal and anticancer

The petal extract was more effective than standard antifungal agents, the bud extract inhibits the growth of *E. faecalis*. The extract inhibits fusarium wilt in watermelon and improves resistance in plants.

The hydroalcoholic extract of leaves and petals reduces tumor development.

Insecticide, Mosquitocide, and larvicide

Marigold has larvicidal properties and is effective against the larvae of *Aedes aegypti* (mosquito) and *Meloidogyne incognita* (nematode). The essential oil from the leaves and flowers has biocidal properties and has a bactericidal and fungicidal effect. The leaves contain an active compound that repels the mosquito.

Nematicide

The roots of *Tagetes erecta* contain thienyls, which inhibit the nematode egg hatching and induce oxidative stress in the nematode. The plants act as non-hosts for certain nematodes hence marigolds act as trap crops for attracting nematode-trapping fungi that can kill nematodes.

Wound healing

The leaf extract heals the wound faster than the other cream. The flower also has healing potential due to its antioxidant, antimycotic, and analgesic properties.

Painkiller

The flower extract has analgesic properties and is used in traditional medicine to treat pain.