



Chamomile extract

, derived from the flowers of the chamomile plant (*Matricaria chamomilla* or *Chamaemelum nobile*), is widely used in skincare and herbal medicine for its soothing and anti-inflammatory properties.

Chemical Properties:

1. **Chemical Composition:**

- **Chamomile Extract** contains a variety of active compounds that contribute to its therapeutic effects, including:
 - **Flavonoids:** Key flavonoids in chamomile include apigenin, quercetin, and luteolin. These compounds have antioxidant and anti-inflammatory properties.
 - **Essential Oils:** Chamomile essential oil contains bisabolol and chamazulene, which contribute to its anti-inflammatory and antimicrobial effects.
 - **Triterpenes:** Compounds like matricin (which is converted to chamazulene upon heating) are present in chamomile and have anti-inflammatory properties.
 - **Polysaccharides:** These contribute to the extract's soothing and moisturizing properties.

2. **Chemical Structure:**

- **Apigenin:** A flavonoid with a chemical structure characterized by two benzene rings linked by a three-carbon chain with hydroxyl groups.
- **Bisabolol:** A sesquiterpene alcohol with a structure featuring a cyclohexane ring and an alcohol group.
- **Chamazulene:** A triterpene with a structure that includes a blue-colored ring system, which is formed from the thermal decomposition of matricin.

3. **Physical Properties:**

- Chamomile extract can vary in appearance from a yellow to brownish liquid or powder, depending on the concentration and method of extraction.
- It has a distinctive floral, slightly herbaceous odor, and is generally soluble in water and alcohol.

4. **Stability:**

- Chamomile extract is relatively stable when stored in cool, dark conditions. However, the stability of specific compounds, such as essential oils, can be affected by exposure to light and air. Stabilized extracts are often used to maintain efficacy in formulations.