Acnutrol™ topical gel is a blend of ingredients designed to help support skin and acne breakouts on the face or other skin surfaces. Over 80 percent of the US population between ages 12 – 24 will develop some form of microbial and inflammatory skin condition such as acne, although skin issues can affect people of all ages. There are various factors that cause and contribute to acne, the most common skin disease in the US, with two of the main culprits being bacteria and the inflammatory response. Acnutrol™ Gel works to target both of these factors. While many topical skin support creams, ointments, and gels often cause skin irritation and dryness, Acnutrol™ Gel is an effective and safe product without any unwanted side effects.

**Highlights of Acnutrol™ Gel**

**Bakutrol™** is a potent broad-spectrum antimicrobial and anti-inflammatory agent that has been shown to help reduce both the bacterial activity and inflammation seen in various skin conditions. It contains bakuchiol, a natural phenol isolated from the seeds of Psoralea corylifolia, a tree native to China known for its uses in traditional Chinese medicine. Bakuchiol has a natural ability to fight inflammation, by controlling leukocytic functions at the site of the inflammation (Ferrándiz ML, et al, J Pharm Pharmacol. 1996). Bakuchiol also possesses protective antioxidant characteristics due to its scavenging activity against oxidative damage to lipids and proteins (Adhikari S, Chem Res Toxicol. 2003).

Research on bakuchiol demonstrates its ability to inhibit both the growth of acne-causing bacteria and the COX/LOX inflammatory pathways. A pilot study on subjects with a diagnosis of facial acne vulgaris showed significant reductions in inflammatory (papules, cysts) and non-inflammatory (blackheads) lesions (Yaping, E, et al, SUNY Downstate Medical Center, Brooklyn, NY). Forty-five percent of these study subjects also experienced partial or total clearing of acne-related post-inflammatory hyperpigmentation (PIH) which can follow acne vulgaris and results in skin melanosis (dark pigmentation).

**Silvercillin™** is a highly effective broad-spectrum antimicrobial and anti-inflammatory composed of pure silver complexed with purified water. Silvercillin™ is distinct from traditional colloidal (ionic) silvers of the past, as it uses technology that permanently distributes the mineral into the structure of the purified water. This ensures that the silver will not fall out of solution or suspension, avoiding aggregation and build-up of silver in the body. This means that it will not aggregate or cause a build-up of silver in the body. As a result, Silvercillin™ is a powerful destroyer of pathogens, and can be used safely as a topical agent with no known toxicity or side effects.

When skin conditions arise, Silvercillin™ supports the body’s natural process of repairing dermal and epidermal tissue by reducing any damaging bacteria and stimulating the production of stem cells. This helps to fight inflammation while accelerating the proliferative (reconstructive) phase of the healing process. By controlling unwanted pathogens, Silvercillin™ assists in decreasing the workload of the immune system. This will result in faster healing with less chance of scarring. To learn more about Silvercillin's specific mechanisms of action, please refer to our technical sheet on Silvercillin as a stand-alone product.
**Zinc** is an essential mineral required for many cellular processes, including wound healing, protecting against free radicals, and the proper functioning of the immune system. A deficiency in this mineral will impair the immune response and promote systemic inflammation. Substantially high levels of zinc are found in the skin, especially in the epidermis (outer layer). It is known for helping to maintain the integrity of the skin, with many dermatologic conditions (including acne) being associated and supported with zinc. Thus, combining this mineral with other skin-supportive nutrients appears to be beneficial in assisting with skin conditions.

Zinc’s effect on inflammatory cells and especially on granulocytes (white blood cells such as eosinophils or basophils) is its most significant mechanism in regards to acne. Zinc sulfate, the form of zinc found in Acnutrol™ Gel, has been shown to decrease the number of inflammatory lesions associated with acne such as papules and cysts (Verma KC, *et al.*, *Acta Derm Venereol*. 1980).

The therapeutic effect of the topical administration of zinc has been tested with successful results. A study which looked at patients with melasma, pigmentation of the face that occurs in some pregnant women or those on birth control pills, demonstrated that a topical 10 percent zinc sulfate solution was an effective, safe, formulation for this skin condition (*Sharquie KE, Dermatol Surg, 2008*).

**Acnutrol™ Gel Ingredients:** Water, silver (as Silvercillin™), polyacrylate crosspolymer-6, tocophersolan, zinc sulfate, dehydroacetic acid, benzyl alcohol, hydrolyzed Psoralea corylifolia extract (Bakutrol™), xanthan gum.

**How to Use:**
- Cleanse skin thoroughly before each use. Apply topically at first sign of a breakout one to three times per day.
- For those with sensitive skin, it is suggested to do a small patch test prior to use

**Consider combining with Acnutrol™ capsules for additional skin support**

Acnutrol™ capsules provide comprehensive support for healthy acne control by focusing on the internal healing process and overall skin health. The nutrients in Acnutrol™ work synergistically to target the various factors that cause and contribute to acne, addressing the root causes of this skin condition. These capsules include a generous amount of pantothenic acid (2500 mg), along with carnitine, zinc, copper, selenium, chromium, biotin, niacin, vitamin B6, and the fat-soluble vitamins A, D, E, and high-gamma mixed tocopherols. Please see the corresponding technical sheet for complete details on Acnutrol™ capsules.

**References**
3. A Clinical Study Evaluating the Dermatologic Benefits of Topical Bakuchiol (UP256) Cream on Facial Acne. Yaping E, MD, Susan C. Geen, Alan R. Shalita, MD, and Wei-Li Lee, PhD; Department of Dermatology, SUNY Downstate Medical Center, Brooklyn, NY.