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What's Inside Ultra-Strength Bengay?

By Patrick Di Justo 10.20.08



Photo: Tim Morris

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Camphor

Originally derived from a type of laurel tree (*Cinnamomum camphora*), this waxy aromatic substance has been used as a drug since the Middle Ages. It's absorbed quickly through the skin, where it activates the TRPV3 and TRPV1 nerve receptors, creating a cooling sensation followed by an analgesic—local anesthetic—effect. Camphor is also the active ingredient in Vicks VapoRub and some pest repellents— insects detest the smell. Nowadays, it's synthesized from turpentine oil.

Menthol

An extract of peppermint oil, menthol is often called peppermint camphor because the effects of the two are so similar (menthol triggers the TRPM8 nerve receptors). It adds a bracing, albeit fake, freshness to thousands of products, from cigarettes to mouthwashes to sunburn ointments.

Methyl Salicylate

Another mild analgesic, this is synthesized oil of wintergreen. It also happens to be a cousin of aspirin, and it's the spark-in-the-dark stuff in Wint-O-Green Life Savers. The substance's dirty little secret? It's toxic: Excessive use of topical methyl salicylate creams can be fatal, especially for teenagers, whose livers can't break it down quickly.

Carbomer 940

This clear thickening agent is made from cross-linked polymers of acrylic acid (the stuff in Plexiglas and floor polish). In gel form, it's used in hair styling products, and versions of it are present in "blue ice" cold packs. Ingestion or inhalation is hazardous, so don't Bengay a sore tongue.

Polysorbate 80

A favorite food of Zippy the Pinhead, polysorbate 80 is used in Bengay as an emulsifier, keeping the ingredients mixed. In other contexts, it's believed (by very desperate people) to halt hair loss by stripping away dihydrotestosterone from your scalp's hair follicles. There's somewhat stronger evidence that it causes infertility in rats—when lab technicians inject it directly into their little bodies.

Edetate Disodium

In the event of a calcium or digitalis overdose, this microcrystalline powder can be injected as an emergency measure to restore the body's calcium balance or heart rate. Here it acts as a preservative and stabilizer, preventing outside impurities from spoiling the contents.

Lanolin

Purified wool grease (lana is Latin for "wool"). Lanolin is secreted by the sebaceous glands of sheep and goats, waterproofing their coats. It's mostly cholesterol (lab-grade cholesterol is derived from lanolin) and other fatty acids, and it's used in topical products like Bengay to prevent the skin from drying out. Ever shaken hands with a shepherd? Sssoffft.

Potassium Hydroxide

Also known as caustic potash or lye. Naturally derived from wood ash, KOH is used to make liquid soaps and provides the "alkaline" in alkaline batteries. Concentrated KOH reacts violently with water (giving off tremendous heat) and with metals like zinc and copper (emitting potentially explosive hydrogen gas). Here it's just a humble emulsion stabilizer—ensuring all the ingredients mingle properly.