

## COMPOSITION

Cayenne Pepper Oil- *Capsicum frutescens* Seeds  
Birch Oil -*Betula Alba* Bark  
Canada Balsam Oil- *Abies balsamea* L. Bark  
Chaparral- *Larrea Tridentata* Extract Leaves/ Roots  
Juniper Berry Oil - *Juniperus Communis* Berries  
Yarrow Extract- *Achillea Millefolium*, Flower Heads

## INDICATIONS

The product is indicated for the relief of joint and muscle pain relief (arthritis, strained muscles, sports injury, low back pain, nerve pain).

## DOSAGE

Adults and children 12 years and older:  
Apply to affected area not more than 3-4 times daily. If condition worsens, or persists for more than 7 days or clears up and occurs again within a few days discontinue use of this product and consult a physician.

## DURATION OF USE

No specified duration of use. No known limitations to duration of use.

## PHARMACOLOGY

**CAYENNE PEPPER OIL - CAPSICUM FRUTESCENS SEEDS**

Cayenne contains 0.3- 1% capsaicinoids, with capsaicin accounting for 63-77% of these compounds. It also contains ascorbic acid, fatty oils, carotenoids, and a complex mixture of volatile components (Wicht 2002). Cayenne has been demonstrated to selectively activate certain groups of unmyelinated primary afferent sensory neurons (type "C"). This action has been implicated in the ability of topical cayenne applications to relieve symptoms of herpetic neuralgia, postmastectomy pain syndrome, osteo and rheumatoid arthritis, painful diabetic neuropathy, psoriasis, and pruritis (Krinsky 2003).

**BIRCH OIL - BETULA ALBA BARK**

The bark of this tree contains tannin. Both the bark and leaves yield a volatile oil, to which is due their peculiar and pleasant aroma. This oil is largely sold as oil of wintergreen, either wholly substituted for the latter, or mixed with it. Its identity with oil of gaultheria was pointed out by Prof. Procter, in 1843, who also called attention to the fact that it was a product that it did not exist pre-formed in the bark as found on the market, but that it was the result of the mutual reaction between a neutral compound of the bark (somewhat similar to amygdalin) to which he applied the name gaultherin, and water. This oil was shown by Pettrigrew (1883) to be a very pure methyl salicylate (Felter 1898). Constituents include approximately 3% flavonoids, triterpenes, ascorbic acid, volatile oils, and potassium salts (Wicht 2002).

## PHARMACOLOGY

**CANADA BALSAM OIL- ABIES BALSAMEA L. BARK**

The juice procured from Canadian balsam is obtained by making incisions into the tree, but more generally by collecting the fluid, which is discharged from the cavities containing this oleoresin, which forms between the wood and the bark. Large amounts are gathered in the province of Quebec. According to Flückiger, this balsam (or rather oleoresin), consists of resin soluble in alcohol and ether (60 per cent), resin soluble in ether, insoluble in alcohol (16 per cent), and volatile oil (about 24 per cent). The latter, distilled from fresh leaves and cones of *Abies balsamea*, was proved to contain laevo-pinene and laevo-bornyl-acetate (Felter 1898).

**JUNIPER BERRY OIL - JUNIPERUS COMMUNIS BERRIES**

The applicable part of juniper is the berry. The berry contains 0.5% to 1.55% essential oil. The oil contains about 20% alpha-pinene, 10% cadinene, 9% limonene, 8.5% myrcene, 8% borneol, 7.2% caryophyllene, 7% germacrene, and several other constituents in smaller concentrations. Juniper berry oil has demonstrated efficacy in alleviating ailments of the kidneys and stomach when used orally. Topical applications have demonstrated anti-rheumatic properties. It is also thought to aid in the process of wound healing (Natural Medicines Comprehensive Database 2005).

**YARROW EXTRACT- ACHILLEA MILLEFOLIUM, FLOWER HEADS**

Yarrow has diaphoretic, antipyretic, hypotensive, astringent, diuretic, urinary antiseptic, spasmolytic, and antifatulent effects. Yarrow contains amino acids, fatty acids, ascorbic acid, caffeic acid, folic acid, salicylic acid, succinic acid, alkaloids, flavonoids including rutin, tannins, volatile oil, an unknown cyanogenetic compound, and sugars. The volatile oil contains chamazulene, other azulenes, and trace amounts of thujone (Natural Medicines Comprehensive Database 2005). The astringent properties, as well as the salicylic acid content are believed to impart the therapeutic properties delivering efficacy as a topical agent.

## MECHANISM OF ACTION

Studies show that capsaicin works by depleting and then blocking the production of “substance P,” which is thought to be the main chemical messenger of pain from the peripheral sensory nerves to the brain. It takes 3–4 weeks to achieve maximum results. It may also be involved with the release of inflammatory substances in affected joints of arthritis.

## CONTRAINDICATIONS

- For external use only. Wash hands after use. Avoid contact with eyes and mucus membranes.
- Do not bandage, apply to wounds or damaged skin.
- If rash, irritation, redness or blisters occur discontinue use.
- The application of external heat, such as an electric heating pad, may result in excessive skin irritation or skin burn.
- Caution: keep out of reach of children
- Do not use this product if pregnant or breast feeding.
- Do not use this product on pre-existing skin conditions, if you have liver disease, or if you have allergies to cayenne preparations, compositae family plants, or salicylates.

ADVERSE EFFECTS

Skin irritation, redness, rash, or blister may occur. See above contraindications.

DRUG INTERACTIONS

There exist various “theoretical” possibilities for interaction with medications, but none have been objectively reported. This product should not be combined with other topical medications.

REGULATORY STATUS

Within Canada, the product has received a “submission number” from the NHPD (Natural Health Products Directorate), and is currently awaiting its NPN (natural product number).

NON MEDICINAL INGREDIENTS

Water, propylene glycol, aminomethyl propanol, ethoxydiglycol, polyacrylic acid, diazolidinyl urea, disodium EDTA, methyl paraben, propylparaben, acrylates copolymer.

REFERENCES

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