AO ProRinse SENSITIVE

AO ProRinse SENSITIVE antioxidant-based oral rinse refreshes breath and delivers antioxidants to soothe oral tissues. A unique combination of powerful antioxidants and dedicated extracts work in concert with our natural salivary defense system ensuring a healthy environment while counteracting bad breath. The natural herbal compounds and essential oils bathe and soothe oral tissues and make AO Pro Rinse/Sensitive cool, mildly minty and pleasant tasting. All PerioSciences rinses are free of alcohol, parabens and sodium lauryl sulfate. For best results, use with AO Pro Toothpaste SENSITIVE and AO ProVantage Gel.

FEATURES AND BENEFITS

**Antioxidants Phloretin and Ferulic Acid**
- Phloretin, derived mainly from apples, is an effective polyphenolic antioxidant specific to the sub-group flavonoids.
- Ferulic acid, found in the seeds and leaves of most plants, is an effective antioxidant and acts in concert with other antioxidants.
- Combination antioxidants have been shown to work better than one antioxidant alone.

**Specific Selection and Concentration of Soothing Compounds**
- *Zanthoxylum Americanum* (Prickly Ash) Bark Extract is a polyphenolic plant compound that can soothe sensitivity and has antiseptic and anti-inflammatory benefits
- Allantoin is a cosmetic and pharmaceutical topical that soothes and inactivates common irritants
- *Hamamelis Virginiana* (Witch Hazel) Extract has proven soothing and healing benefits and is active against dental bacteria

**Zinc Gluconate, Zinc Lactate**
- Proven against volatile sulfur compounds (VSC), bacterial by-products that are at the root of halitosis

**Plasdone - Stain Lifting Polymer**
- Advanced, non-abrasive ingredient shown to dissolve tea, coffee etc. stains without the harsh effects of peroxides

**Xylitol**
- Xylitol found in the fibers of many fruits and vegetables is a sugar alcohol sweetener used as a naturally occurring sugar substitute. Xylitol is specific in its inhibition of the mutans streptococci group, bacteria that are significant contributors to tooth decay.

**APPLICATION**

Use approximately one tablespoon daily after brushing your teeth. For maximum benefits, vigorously swish for up to one minute, then expectorate (spit out). Do not swallow. Refrain from eating or drinking for about 30 minutes after use.

**Alternate Uses**

Can be used to refresh retainers, partials and dentures.

Note: Studies have shown that people wearing removable dental appliances have a higher count of oral bacteria compared to those not wearing any dental appliances. Use as-is or dilute in water at a 1:1 ratio in water-based dental cleaning tools.
KEY INGREDIENTS

PHLORETIN
Phloretin is a polyphenolic compound in the sub-group flavonoids and is mainly derived from apples. It is a potent antioxidant and has been shown to inhibit several types of destructive enzymes. Phloretin is known to adsorb to lipid surfaces, such as cell membranes. This adsorption can result in a change of the membrane permeability for a variety of charged and neutral compounds. Recent research has examined the effect of phloretin on carcinogen metabolism, anti-inflammatory and anti-hormonal activities, after being identified as one of the strongest inhibitors of cyclooxygenase-1, which could contribute to its anti-inflammatory effect.

FERULIC ACID
This effective, polyphenolic antioxidant is a cinnamic acid found in the seeds and leaves of most plants, especially in the brans of grasses such as wheat, rice and oats. Its chemical structure strongly resembles that of curcumin, also a potent polyphenol. Polyphenols are so named because they have multiple phenolic constituents. They are particularly efficient antioxidants as they are able to donate electrons to neutralize a free radical while remaining relatively stable. Ferulic acid works from the aqueous part of a cell, but is especially active to protect LDL (low density lipoproteins) from oxidation. Ferulic acid has been found to have synergistic and stabilizing properties when combined with other antioxidants. More recently, ferulic acid was shown to inhibit biofilm formation by gram-negative bacteria.

ZANTHOXYLUM AMERICANUM (PRICKLY ASH) BARK EXTRACT
Zanthoxyum, or prickly ash, is an aromatic deciduous shrub or small tree found all over the globe. Its fruit, bark and root bark are used for a variety of purposes. Its common name Toothache Tree refers to the usage of the bark, which was used to stimulate the flow of saliva and soothe toothaches. Prickly ash, with abundant polyphenolic constituents, as been shown to have anti-inflammatory as well as antimicrobial properties. Other uses for Prickly Ash are as a capillary relaxant and circulation stimulant.

HAMAMELIS VIRGINIANA (WITCH HAZEL) EXTRACT
Hamamelis virginiana, commonly known as witch hazel, is a small tree or shrub native to North America. Leaves, and to a lesser extent bark, have a long history in popular medicine to relieve digestive conditions as well as for inflammation of the gums and mouth mucosa. Witch hazel is rich in gallic-acid related tannins as well as proanthocyanidols (polyphenolic compound). Hamamelis essential oil and tannins demonstrated bacteriostatic properties – especially against Gram negative bacteria and against type 1 Herpes simplex (Alonso J., 2004) and bactericidal effects against the bacteria involved in periodontitis (Alonso J., 2004).

ALLANTOIN
Allantoin is a metabolic intermediate of a wide variety of organisms: from bacteria, to vegetals and animals. Allantoin was found in many plants, particularly in the leaves and roots of comfrey. The beneficial effects of Allantoin are well documented. It is mainly known for its anti-irritant and protective effects which it exerts by complexing with and neutralizing many irritant and sensitizing agents. Allantoin enhances epidermal cell proliferation thereby promoting the regeneration of damaged epithelium and wound healing. Allantoin enjoys a long history of use in cosmetics and topical pharmaceuticals with no findings of toxicity or adverse reactions.

PLASDONE
This stain-lifting polymer was tested intensively and shown to lift stains by complexing with compounds that cause discoloration of tooth enamel. A series of in vitro studies on HAP disks showed that pastes and rinses with Plasdone achieved results superior to products without it, both with regards to overall brightness and removal of stains from tea, coffee, red wine etc. Plasdone is a non-oxidative, non-peroxide and non-abrasive ingredient, making it ideally suitable for sensitive or sensitized teeth.

MENTHOL, THYMOL, ESSENTIAL OILS OF PEPPERMINT, SAGE, CLOVE
Menthol and thymol, purified from the mint and thyme plants respectively, along with complete essential oils such as peppermint, sage and clove have been the subject of many studies revealing a variety of benefits. In a concentration-dependent manner, all have significant antimicrobial capabilities. Essential oils of sage and clove are known to be particularly soothing and calming essential oils.

XYLITOL
Xylitol is a naturally occurring sugar substitute and found in a variety of fruits, vegetables and other plants. Research confirms a plaque-reducing effect and suggests the compound attracts and then “starves” harmful micro-organisms, allowing the mouth to remineralize damaged teeth with less interruption. Xylitol is specific in its inhibition of the mutants streptococci group, bacteria that are significant contributors to tooth decay. Additionally, xylitol increases the activity of salivary lactoperoxidase, an antibacterial enzyme.