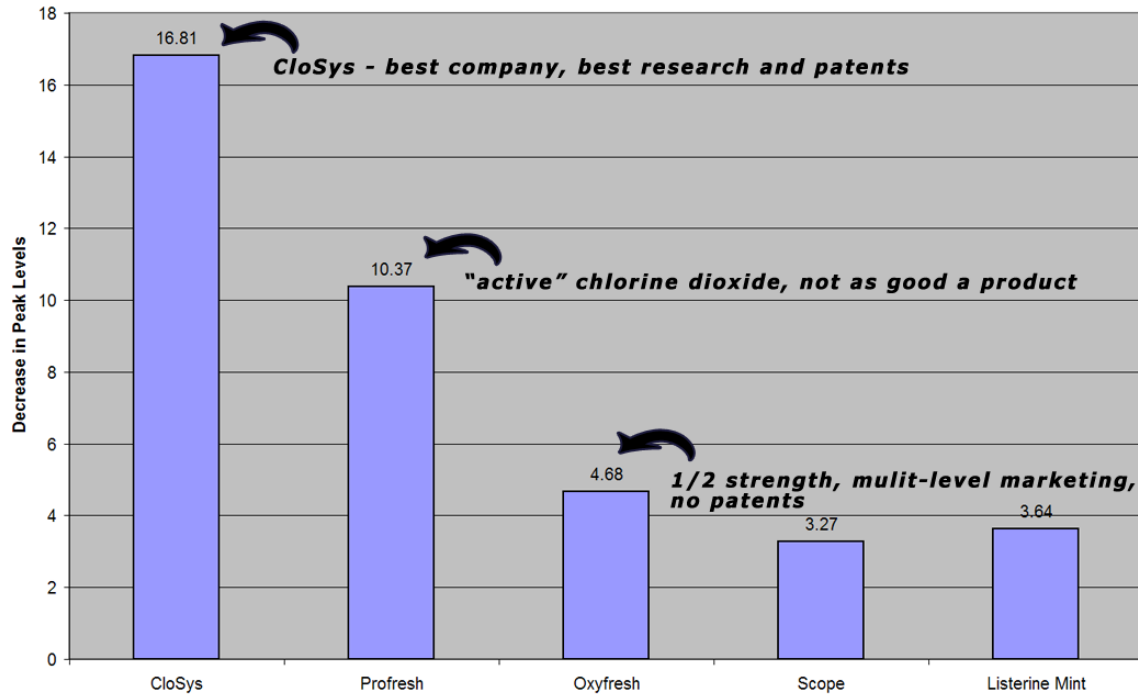


Ability of Oral Health Care Products to Alleviate Oral Malodour

VSC Equivalents



British scientists conducted an independent study of the comparative effectiveness of six oral health care products in reducing volatile sulphur compounds (VSCs). Products included RetarDEX Oral Rinse (CloSys), Profresh, Oxyfresh, Listerine Mint, Scope, and Breath Assure capsules. (Source: Journal of Dental Residency 76 [LADR Abstracts] 1997.)

Six subjects were placed on a regimen using the six products and a water placebo at five time points (baseline, 30 minutes; 1-1/2 hours; 2-1/2 hours; 3-1/2 hours). Electron-donating VSC levels were measured with a sulphide monitor (Interscan 11170) both before and after usage. Except for the Breath Assure capsules, each product was found to reduce VSCs within 20 minutes of use.

VSC concentrations returned to baseline levels within three hours of each product's application in this order: Listerine Mint, Scope, Oxyfresh, Profresh, and RetarDEX Oral Rinse (CloSys) - the latter having the longest lasting effects. Water had no effect in reducing VSC levels. VSC levels, after the administration of Breath Assure, increased at 1/2-hour and 3-hour time points.

It was concluded that RetarDEX Oral Rinse (CloSys) provides a useful therapeutic treatment for oral malodor.

“Ability of Oral Health Care Products to Alleviate Oral Malodour” M. Grootveld, C. Silwood and E. Lynch. Inflammation Res. Group and Dept. of Conservative Dentistry, St. Bartholemew’s and the Royal London School of Medicine and Dentistry, London.

Abstract:

Ability of Oral Health Care Products to Alleviate Oral Malodour. M. GROOTVELD, C. Silwood and E. Lynch (Infl, Res. Grp. and Dept .of Conservative Dentistry, St. Bartholomew’s and the Royal London School of Medicine and Dentistry, London E1 2AD, UK).

Oral malodour (halitosis) is generally ascribable to oral microbial putrefaction generation malodorous volatile sulphur compounds (VSC) which predominantly comprise dihydrogen sulphide and methyl mercaptan. This study assesses the relative effectiveness of 6 oral health care products (OCHPs) [1-6] in reducing oral cavity VSC. A mixed model 3-factor factorial experimental design involving 6 volunteers, 7 treatment regimens (products [1]-[6] and water placebo) and 5 time-points (0.00-3.30 hr.) was undertaken. Electron-donating VSC levels were determined in triplicate using a sulphide monitor (Interscan model 1170) both prior to (0.00 hr.) and following oral rinsing (20ml) or chewing (2 capsules of [6]) episodes with each product examined (0.30, 1.30, 2.30, and 3.30 hr. post administration.). Results were recorded as peak and steady-state VSC equivalents (p.p.b.). With the exception of product [6], each OHCP tested was found to reproducibly reduce VSC concentrations within 20 min. of treatment, the mean percentage \pm s. e. decreases in peak (and corresponding steady-state) levels being in the order [1] 16.81 \pm 4.36 (16.44 \pm 4.27)% ($p < 0.002$) > [2] 10.37 \pm 2.12 (21.86 \pm 3.41%) ($p < 0.001$) > [3] 4.68 \pm 2.81 (13.66 \pm 2.69)% ($p < 0.001$ for steady-state data) > [5] 3.27 \pm 1.35 (3.19 \pm 2.39)% ($p < 0.05$ for peak level data) > [4] 3.64 \pm 2.50 (0.00 \pm 3.82%) (n.s.). Subsequently, VSC concentrations returned to their zero-control (baseline) values within 3 hr., the rate of this regression being in the order [4]>[5]>[3]>[2]>[1] for both peak and steady-state measurements. As expected, the water placebo exerted no influence on oral cavity VSC levels. However, administration of product [6] gave rise to a 6.36 \pm 2.98 (12.56 \pm 3.88)% increase in this parameter at the 0.30 hr. time-point ($p < 0.01$ for steady-state data), values which continued the rise for 3 hr. thereafter. The most effective OHCPs ([1-3]) contain admixtures of chlorite anion and chlorine dioxide (both of these agents have the ability to directly oxidize VSC to non malodorous products and the latter is powerfully cidal towards odourigenic micro-organisms). OCHPs containing oxohalogen oxidants provide a useful therapeutic avenue for the treatment of oral malodour.

[1]: Retardex (CloSys), [2] Profresh [3]: Oxyfresh, [4]: Listerine Mint, [5] :Scope, [6]: Breath Assure capsules.

Note: RetarDEX has been renamed CloSys, which is available at www.Breathaid.com