PCT WORLD INTELLECTUAL PROPERTY ORGANIZATION
International Bureau

INTERNATIONAL APPLICATION PUBLISHED UNDER THE PATENT COOPERATION TREATY (PCT)

(51) International Patent Classification 6 : A61K 7/16 — A1

(11) International Publication Number: WO 99/00106

(43) International Publication Date: 7 January 1999 (07.01.99)

(21) International Application Number: PCT/US98/12617

(22) International Filing Date: 18 June 1998 (18.06.98)

(30) Priority Data:
08/884,282 27 June 1997 (27.06.97) US

(71) Applicant: THIONE INTERNATIONAL, INC. [US/US]; 3201 Andrews Court N.W., Atlanta, GA 30305 (US).

(72) Inventor: HERSCH, Theodore; 3201 Andrews Court N.W., Atlanta, GA 30305 (US).

(74) Agents: WITTENBERG, Malcolm, B. et al.; Crosby, Heafey, Roach & May, Suite 1900, 4 Embarcadero Center, San Francisco, CA 94111–4106 (US).

(81) Designated States: AU, CA, CN, IL, JP, KR, MX, SG, European patent (AT, BE, CH, CY, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE).

Published
With international search report.

(54) Title: INTRA–ORAL ANTIOXIDANT PREPARATIONS

(57) Abstract

The combination of several synergistic antioxidants, enzymatic co–factors and amino acids in appropriate delivery vehicles employed in aerosol carriers, mist and pump oral sprays, solutions, such as oral irrigators, mouth rinses and mouthwashes, or gels and solid compositions as a means of preventing and ameliorating signs and symptoms and complications to the oro–pharyngeal cavity and mouth including buccal mucosa, gums and tongue and the upper respiratory tract from damage caused by free radical species induced by tobacco smoke, smokeless tobacco, ingested or chewed noxious, malodorous or harmful substances and other inhaled environmental pollutants and particulate matter, including tobacco to secondary smokers.