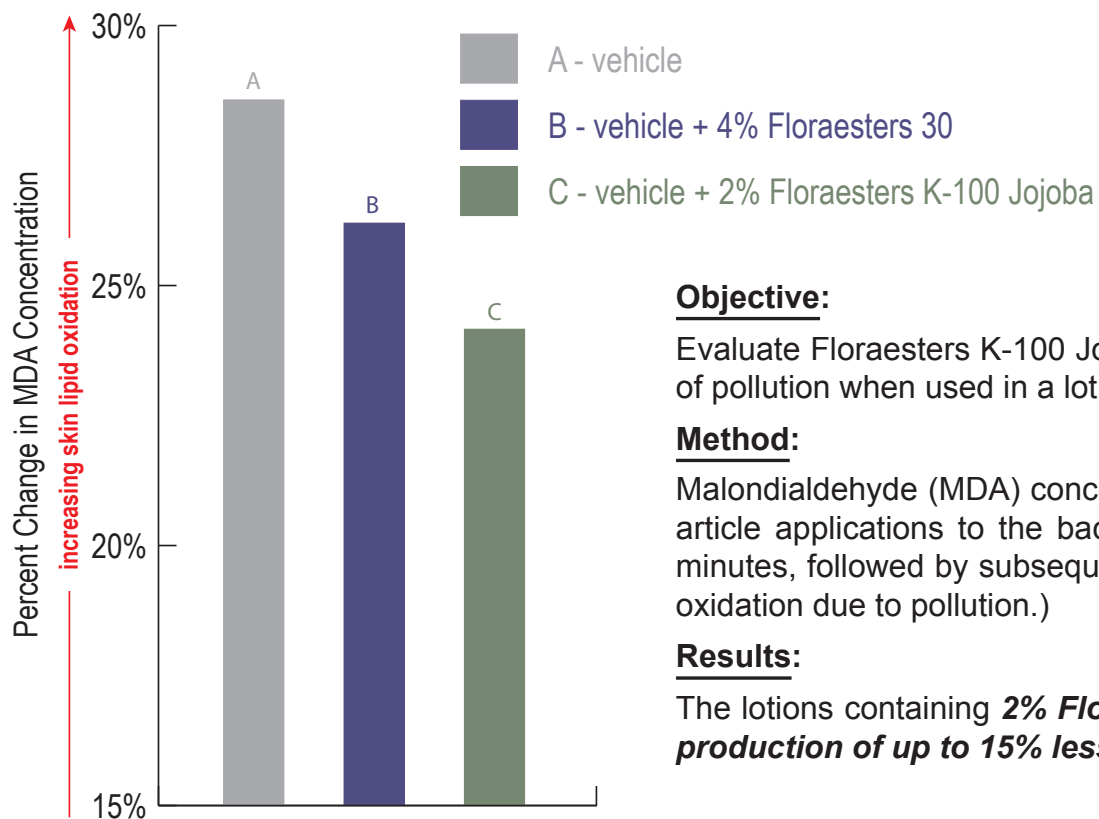




Floraesters K-100® Jojoba and Floraesters 30 Improved Antipollution Properties in a Lotion

Percent Change in MDA Concentration



Objective:

Evaluate Floraesters K-100 Jojoba and Floraesters 30 for their potential to reduce the effects of pollution when used in a lotion.

Method:

Malondialdehyde (MDA) concentration evaluations were made at baseline, followed by 5 test article applications to the back. Skin was exposed to pollution (*i.e.* tobacco smoke) for 20 minutes, followed by subsequent MDA evaluations. (MDA is used as an indicator of skin lipid oxidation due to pollution.)

Results:

The lotions containing **2% Floraesters K-100 Jojoba or 4% Floraesters 30 resulted in the production of up to 15% less MDA** than the vehicle.

Vehicle Lotion (%wt/wt): Water (q.s.), Glyceryl Stearate (and) PEG-100 Stearate (4.0%), Cetyl Alcohol (3.0%), Glycerin (2.0%), Phenoxyethanol (and) Methylparaben (and) Ethylparaben (and) Butylparaben (and) Propylparaben (and) Isobutylparaben (0.7%), Xanthan Gum (0.2%), and Disodium EDTA (0.03%).

Floratech Ingredient: Floraesters K-100 Jojoba and Floraesters 30

The clinical study of Floratech® test formulation (CTL_17-076) was conducted by INOVAPOTEK, Pharmaceutical Research and Development Lda on a panel of 22 male and female subjects, ranging from 21 to 59 years of age (mean age = 39). The study was randomized, double blind, and conducted within a controlled environment. Test article applications were made twice daily (AM and PM) for a total of 5 applications. MDA concentration was evaluated using gas chromatography – mass spectrometry. The test article containing 2% Floraesters K-100 Jojoba or 4% Floraesters 30 reduced MDA generation, relative to the vehicle without; however, there was no statistical significance between test articles. This may be attributed to the fact that the breakdown of Floraesters K-100 Jojoba and Floraesters 30 (also lipids) will also result in the generation of MDA. (Clinical Study 17-076 - Outside Lab report available upon request.)