The In Vitro Classification - BCOP classification scheme proposed by Sina, 1994.

In Vitro Classification: 13.7 Cat. 1

MB 15xOD490 under IIVS Opacity 10.0 mild irritant

In Vitro Classification: 26.9 OK, to 7.4 IIVS 15xOD490

In Vitro Classification: 111.6 No category severe

IIVS: 6.9 18.6 IIVS 15xOD490 1.9 - 8.2 IIVS Opacity OK Cat. I

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References:


Conclusions

Intra-laboratory reproducibility evaluations showed that generally the same irritation class predictions were made in each of the three trials (1 of 35).

Inter-laboratory reproducibility evaluations showed that both laboratories generally obtained the same irritation class predictions for each chemical (17 of 35).

Overall, the BCOP assay provided similar rank order of eye irritation and similar predictions of irritation classes, relative to the available in vivo data. However, using the standard BCOP protocol for liquids, some of the surfactants were under-predicted.

Some surfactants result in relatively low-opacities (e.g. SLS), as a result of limited protein binding, progressive loss of epidermal, and minimal corneal swelling. According to the section of surfactants on the corneal epithelium has often been evaluated primarily based upon increases in the fluorescein permeability values (OD490). Furthermore, surfactants have been termed irritants using modified exposure times of 15, 30, or 60 minutes to influence the evaluation of changes in epithelial barrier function (Cater, 2003), and to enhance the potential for progression of opacities due to stromal swelling.

These results suggest that regulatory safety testing of certain classes of surfactants, extended exposure times may be justified.