

At Dow Pharmaceutical Sciences Inc., We Focus Only On Topical Products.



Ophthalmic Formulation Experts

- Formulation Development and Optimization
- *In vitro* Corneal/Scleral Penetration Studies
- Analytical Methods Development and Validation
- Stability Studies Under ICH Guidelines
- Clinical Labeling, Packaging and Distribution
- Non-Clinical Supplies



Dow Pharmaceutical Sciences, Inc.

The D in Topicals R&D

Since 1977

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Ophthalmic Product Development





Your Next Ophthalmic Formulation: Why Work With Dow?

Ophthalmic Formulation Experience

Common challenges with ophthalmic formulation development are API solubility, API stability and poor penetration through the ocular tissue. For over 30 years Dow Pharmaceutical Sciences has focused exclusively on topical product development, so our formulation and analytical scientists have seen and solved most of these problems. We help you select non-irritating prototype formulations with appropriate packaging components to deliver the optimum drop size.

Unique *In vitro* Ocular Penetration Model

Newborn bovine eyes are of sufficient size and quality to test for drug permeation of both scleral and corneal tissue. Using the Bronaugh flow-through diffusion cell system and the bovine model developed at Dow, we screen multiple prototype formulations for ocular penetration. To ensure uniformity we use freshly excised bovine tissue prepared by our own personnel. Concurrently, we evaluate physical and chemical stability. If required, we further optimize to enhance penetration before we select a final formulation and a back-up for further development.

One-Stop Ophthalmic Product Development

Our ophthalmic team has many years of product development experience at major eye care companies developing successful formulations for a variety of indications. Coordinated by a Dow project manager, in one location you have a full team of specialists to provide formulation development and optimization, *in vitro* ocular penetration studies, analytical method development and validation, stability, manufacturing of non-clinical supplies, labeling and distribution to your clinical sites.

