Alternatives for Ocular Toxicity Testing: ICCVAM and NICEATM Recent and Planned Initiatives

W Stokes[1], M Wind[2], N Choksi[3], D Allen[3], R Tice[1]
[1]NICEATM/NIEHS/NIH/DHHS, RTP, NC, USA; [2]US CPSC, Bethesda, MD, USA, [3]ILS, Inc., Contractor Supporting NICEATM, RTP, NC, USA.

Ocular testing is required to determine if chemicals or products may cause eye injuries such as irritation and temporary or permanent blinding. However, rabbits used in this test can experience significant pain and distress when eye injuries occur. Accordingly, ICCVAM considers ocular toxicity one of its highest priorities and has initiated several activities to advance refinement, reduction, and replacement alternatives for such testing. Recent activities include a scientific symposium on mechanisms of chemically-induced ocular injury and recovery and a symposium on minimizing pain and distress in ocular toxicity testing. These symposia produced recommendations for research necessary to develop improved alternative methods and approaches. ICCVAM and NICEATM also evaluated and recommended the first *in vitro* test methods that can be used to identify substances that cause permanent or severe eye damage without the use of animals, and developed a database of *in vivo* ocular test data to support future validation studies. Planned initiatives are expected to increase the accuracy and applicability of several *in vitro* methods and include a comprehensive review of the use of anesthetics and analgesics to avoid pain and distress during ocular testing. These recent and planned activities are expected to further refine, reduce, and replace animal use for ocular safety testing. Supported by: NIEHS N01-ES-35504, N01-ES-75408.

This abstract reflects the view of the authors, and does not represent the official position of the US Consumer Product Safety Commission or other agencies.