



In vitro Skin Corrosion

Chemical compounds may manifest a response when they interact with the skin. The response could vary in intensity, ranging from mild irritation to corrosion. A corrosive compound causes permanent skin injury in the form of visible necrosis, in both the epidermis and dermis. Skin necrosis occurs when cells die prematurely due to autolysis.

JRF Global offers a battery of *in vitro* skin corrosion tests, which can be customized as per your requirements to judge the corrosive potential of any formulation.

Skin Corrosion using RhE (OECD 431)

This test uses reconstructed human epidermis (RhE) as the matrix for conducting tests. RhE is developed from human-derived non-transformed epidermal keratinocytes and the final matrix is very similar to human epidermis in structure, morphology and properties. The skin corrosion potential of the test item is then measured using the MTT assay.

Skin Corrosion using Transcutaneous Electrical Resistance (TER) method (OECD 430)

The TER method is an *in vitro* test that evaluates the human health endpoint corrosion. It identifies corrosive items by assessing changes caused to the normal structure and barrier function of the stratum corneum using rodent-based skin discs. The difference in permeability is measured using a dye; if the structure of the stratum corneum is compromised, the skin disc will become more permeable to the dye.

Skin Corrosion using Membrane barrier test method (OECD 435)

The Membrane Barrier test uses a synthetic macromolecular bio-molecule barrier and a chemical detection system (CDS) to analyze the corrosivity of the test item. The test identifies the level of damage caused to the membrane barrier after application of test item (similar to human skin) and measures the level of corrosion using pH-dependent color change or similar in the CDS on the other side of the barrier.