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## Techniques for efficient isolation of human Langerhans cells: assessment of potential allergenic compounds

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Langerhans cells (LCs) are immature dendritic cells located in the epidermis and surface epithelium that play a central role in T-lymphocyte mediated skin immunity (Tchou et al., 2003; Pena-Cruz et al., 2001). In order to achieve the biological comportment of immature LCs regarding their reaction with allergens and cosmetics we tested different protocols to extract and cryopreserv fresh epidermal immature LC that where tested for phenotypic and functional characteristics. All the LCs were isolated from skin epidermis obtained from plastic surgery and the four methods were tested in parallel: (a) the role skin was processed with the mechanic disruption obtaining a single cell suspension, that were seeded in culture flasks to collecting the supernatant containing the non adherent cells or purified with a density gradient system (Ficoll Paque Plus<sup>®</sup>); (b) using a single cell suspension from the epidermis and applied a Ficoll flotation process; (c) using a homemade manual skin graft mesher and the LC mechanism of migration. The (b) and (c) systems were equally efficient (78.1 ± 7.3%) but method (c) is better due to reduction of time in processing, delaying the maturation process, showed by flow cytometer analyses. The (a) system was less efficient being left out after the results obtained in (b) and (c).

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### References

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