Reference Publications for Delfin Instruments – February 2011

VapoMeter

Transepidermal water loss TEWL, Skin barrier function, Penetration studies

A Novel Chimeric Lysin Shows Superiority to Mupirocin for Skin Decolonization of Methicillin-Resistant and -Sensitive Staphylococcus aureus Strains.

Quantification of activated and total caspase-14 with newly developed ELISA systems in normal and atopic skin.

Documentation of normal stratum corneum scaling in an average population: features of differences among age, ethnicity and body site.

Formation and Closure of Microchannels in Skin Following Microporation.

Epidermal hyperproliferation in mice lacking fatty acid transport protein 4 (FATP4) involves ectopic EGF receptor and STAT3 signaling.

Iontophoresis mediated in vivo intradermal delivery of terbinafine hydrochloride.

Comparison of tape stripping with the human skin blanching assay for the bioequivalence assessment of topical clobetasol propionate formulations.

The impact of obesity on skin disease and epidermal permeability barrier status.

Up-regulation of serpin SCCA1 is associated with epidermal barrier disruption.

Effects of Alcohol Intake on the Skin Physiology.

Tight junctions in Hailey-Hailey and Darier’s diseases.

Functional Characteristics of the Skin Surface of Children Approaching Puberty: Age and Seasonal Influences.

Dual Role of COUP-TF-Interacting Protein 2 in Epidermal Homeostasis and Permeability Barrier Formation.

Reservoir based fentanyl transdermal drug delivery systems: effect of patch age on drug release and skin permeation.

Skin surface electric potential as an indicator of skin condition: a new, non-invasive method to evaluate epidermal condition.

Epidermal ceramidase activity regulates epidermal desquamation via stratum corneum acidification.

Increased carboxyl protein levels in the stratum corneum of the face during winter.

In vivo friction study of human skin: influence of moisturizers on different anatomical sites.
Cytokines at different stratum corneum levels in normal and sodium lauryl sulphate-irritated skin
Ramalho A., Silva C.L., Pais A.A.C.C. and Sousa J.J.S.

Skin barrier structure and function and their relationship to pruritus in end-stage renal disease

Depth dependence of stratum corneum lipid ordering: a slow-tumbling simulation for electron paramagnetic resonance
Yagi E., Sakamoto K. and Nakagawa K.

Potential mechanisms by which a single drink of alcohol can increase transdermal absorption of topically applied chemicals
Brand R.M., Jendrzejewski J.L. and Charron A.R.

Increased permeability for polyethylene glycols through skin compromised by sodium lauryl sulphate
Jakasa I., Verberk M.M., Bunge A.L., Kruse J. and Kezic S.

Altered penetration of polyethylene glycols into uninvolved skin of atopic dermatitis patients
Jakasa I., Verberk M.M., Esposito M., Bos J.D. and Kezic S.

Variability in the physical properties of the stratum corneum – influences of chronological age and season: 001
Agarwal V., Godfrey M., Long S., Whitby D., Barton S. and Desnos A.

Skin irritation

Influence of tumour necrosis factor-α polymorphism – 308 and atopy on irritant contact dermatitis in healthcare workers.
Davis, J.A., Visscher, M.O., Wickett R.R. and Hoath, S. B.

Spontaneous itch in the absence of hyperalgesia in a mouse hindpaw dry skin model.
Akiyama T., Carstens M.I. and Carstens E.

A double-blind, randomized study to assess the effectiveness of different moisturizers in preventing dermatitis induced by hand washing to simulate healthcare use.
Williams C., Wilkinson S., McShane P., Lewis J., Pennington D., Pierce S. and Fernandez C.
Effects of glycerol on human skin damaged by acute sodium lauryl sulphate treatment.
Atrux-Tallau N., Romagny C., Padois K., Denis A., Haftek M., Falson F., Pirot F. and Maibach H.I.

Role of TNF-polymorphism -308 in irritant contact dermatitis and neurosensory response.
Davis J.A.

The alkaline pH-adapted skin barrier is disrupted severely by SLS-induced irritation
Kim E., Kim S., Nam G.V., Lee H., Moon S and Chang I

Skin Barrier Disruption by Sodium Lauryl Sulfate-Exposure Alters the Expressions of Involucrin, Transglutaminase 1, Proflaggrin, and Kallikreins during the Repair Phase in Human Skin In Vivo.
Törmä H., Lindberg M. and Berne B.

Differential cytokine expression in skin after single and repeated irritation by sodium lauryl sulphate
de Jongh C.M., Lutter R., Verberk M.M. and Kezic S.

A randomized, controlled, double-blind study of the effect of wearing coated pH 5.5 latex gloves compared with standard powder-free latex gloves on skin pH, transepidermal water loss and skin irritation.
Mirza R., Maani N., Liu C., Kim J. and Rehmus W.

Stratum corneum cytokines and skin irritation response to sodium lauryl sulphate

Skin reaction and recovery: a repeated sodium lauryl sulphate patch test vs. a 24-h patch test and tape stripping
Koopman D.G., Kezic S., Verberk M.M.

**Effect of skin care, treatment, nutrition**

Influence of tumour necrosis factor-α polymorphism –308 and atopy on irritant contact dermaitis in healthcare workers.
Davis, J.A., Visscher, M.O., Wickett R.R. and Hoath, S. B.

Tolerance of Baby Cleansers in Infants: A Randomized Controlled Trial.
Dizon M.V., Golzote C., Estanislaor., Mathew N. a and Sarkar R.

Effect of Oral Intake of Ceramide-Containing Acetic Acid Bacteria on Skin Barrier Function.
Oda T., Tachimoto H., Kishi M. and Kaga T. and Ichihashi M.
Anti-aging Medicine, 7(5), 50-54, 2010. Published online: Mar. 25, 2010

S-Aminolevulinic Acid-based Photodynamic Intense Pulsed Light Therapy Shows Better Effects in the Treatment of Skin Photoaging in Asian Skin.
Yang G., Xiang L.H. and Gold M.H.

A randomized, controlled comparative study of the wrinkle reduction benefits of a cosmetic niacinamide/peptide/retinyl propionate product regimen vs. a prescription 0.02% tretinoin product regimen.

The Safety and Efficacy of Pimecrolimus, 1%, Cream for the Treatment of Netherton Syndrome.
Yan A.C., Honig P.J., Ming M.E., Weber J. and Shah K.N.
Arch Dermatol., 146(1): 57-62, 2010

A novel organogermanium protected atopic dermatitis induced by oxazolone.
Lim D.H., Li M., Seo J.-A., Lim K.-M. and Ham S.W.

A double-blind, randomized study to assess the effectiveness of different moisturizers in preventing dermatitis induced by hand washing to simulate healthcare use.
Williams C., Wilkinson S., McShane P., Lewis J., Pennington D., Pierce S. and Fernandez C.

Comparison of skin barrier function and sensory nerve electric current perception threshold between 1gE-high extrinsic and IgE-normal intrinsic types of atopic dermatitis.
Mori T., Ishida k., Mukumoto S., Yamada Y., Imokawa G., Kabashima K., Kobayashi M., Bito T., Nakamura M., Ogasawara K. and Tokura Y.

Skin Care in the NICU Patient: Effects of Wipes versus Cloth and Water on Stratum Corneum Integrity.

Glycylglycine decreases the size of conspicuous facial pores: Single-blinded half areas of face-applied study.
Iida T., Kaneko M., Kawai E., Muta-Takada K. and Inomata S.

Role of TNF-polymorphism -308 in irritant contact dermatitis and neurosensory response.
Davis J.A.
Scalp, lip and nail measurements

Seasonal factors influencing biophysical properties of facial and labial skin.
Gubanova E.I., Glad’ko V.V., Cazei L., Rodina M.Yu. and Lapatina N.G.

Tape stripping on a human nail: quantification of removal
Tudela E., Lamberbourg A., Diaz A.C., Zhai H. and Maibach H.I.

The use of an extended ventilation tube as a countermeasure for EVA-associated upper extremity medical issues

Influence of age and hormone replacement therapy on the functional properties of the lips
Caisey L., Gubanova E., Camus C., Lapatina N., Smetnik V. and Lévêque J.-L.

Water loss through lip, nail, eyelid skin, scalp skin and axillary skin measured with a closed-chamber evaporation principle

Abstracts

Shampooing with pyrithione zinc reduces transepidermal water loss in scalp of dandruff-involved patients
Billhimer W., Erb J., Bacon R., Ertel K and Copas M.

Comparison of two instruments to assess scalp barrier function
Bacon R., Billhimer, W., Ertel, K. and Watson, D.

Wound healing

Epidermal wound healing in severe sepsis and septic shock in humans.

Instrumental evaluation of the protective effects of a barrier film on surrounding skin in chronic wounds
Dini V., Salibra F., Brilli C. and Romanelli M.

Use of nanotechnology-designed footsock in the management of preulcerative conditions in the diabetic foot: results of a single, blind randomized study

Abstracts

Moisture vapour transmission rate – How is this affected by wound fluid viscosity?
Adams S., Pritchard D. and Rogers J.
Evaluation of maceration by trans epidermal water loss (TEWL) in patients with venous leg ulcers
Dini V., Salibra F., Brilli C., Bertone M. and Romanelli M.
Symposium on Advanced Wound Care & Medical Research Forum on Wound Repair, p. 128, 2006.

Skin surface water loss (SSWL)

Abstracts

Measurement of skin hydration in the diapered area of infants with a closed chamber TEWL meter
Alanen, E., Wiesemann, F., Nuutinen, J. and Lahtinen, T.

Physiological and Sympathetic skin response, Hyperhidrosis

Objective evaluation of patients with palmar hyperhidrosis submitted to two levels of sympathectomy: T3 and T4.

Effect of Itch, Scratching and Mental Stress on Autonomic Nervous System Function in Atopic Dermatitis.
Tran B.W., Papoiu A.D.P., Russoniello C.V., Wang H., Patel T.S.; Chan Y.-H. and Yosipovitch G.

Endoscopic lumbar sympathectomy for plantar hyperhidrosis.
Rieger R., Pedevilla S. and Pitclauer S.

Effects of low humidity and high air velocity in a heated room on physiological responses and thermal comfort after bathing:
An experimental study
Hashiguchi N. and Tochihara Y.

Primary Palmar Plantar Hyperhidrosis and Thoracoscopic Sympathectomy: A New Objective Assessment Method

Increased carbonyl protein levels in the stratum corneum of the face during winter
Kobayashi Y., Iwai I., Akutsu N. and Hiroo T.

Endoscopic lumbar sympathectomy for women: Effect on compensatory sweat

Upper limb musculoskeletal disorders - With special reference to sympathetic nerve functions and tactile sensation
Ming Z.
Kuopio University Publications D. Medical Sciences 405. 2007. 91 p. MD Thesis.

Retroperitoneoscopic lumbar sympathectomy for the treatment of plantar hyperhidrosis: technique and preliminary findings
Rieger R. and Pedevilla S.

Physiological and subjective responses to low relative humidity in young and elderly men
Sunwoo Y., Chou C., Takeshita J., Murakami M. and Tochihara Y.

Physiological and subjective responses to low relative humidity
Sunwoo Y., Chou C., Takeshita J., Murakami M. and Tochihara Y.

Abstracts

Objective evaluation of thoracoscopic sympathectomy for palmar hyperhidrosis

Measurement of the amount of average hydrosis for giving data for scientific comparison
Pedevilla S. and Rieger R.
Presented in 7th International Symposium on Sympathetic Surgery, 20–22 March 2007

Veterinary dermatology and skin behaviour, treatment and nutrition, Zoology

Spontaneous itch in the absence of hyperalgesia in a mouse hindpaw dry skin model.
Akiyama T., Carstens M.I. and Carstens E.

Metabolic adaptations to heat stress in growing cattle.

Induced keratinocyte hyper-proliferation in o281 integrin transgenic mice results in systemic immune cell activation.
Teige I., Backlund A., Svensson L., Kvist P.H., Petersen T.K. and Kemp K.
International Immunopharmacology, Jan; 10(1), 2010.

Transdermal Water Loss, Stratum Corneum Hydration and Transmission Electron Microscope Observation on Acetone Damaged Canine Skin Barrier Model.
Oh W., Park S. and Oh T.

Mapping of the dog skin based on biophysical measurements.
Oh W.-S. and Oh T.-H.

Evaluation of a hand-held evaporimeter (VapoMeter®) for the measurement of transepidermal water loss in healthy dogs.
Lau-Gillard P. J., Hill P. B., Chesney C. J., Budleigh C. and Immonen A.

Evaluation of physiological and blood serum differences in heat-tolerant (Romosinuano) and heat-susceptible (Angus) Bos taurus cattle during controlled heat challenge.

Auswirkung von lokal applizierten Fettsäuren auf den epidermalen Wasserverlust, Pruritus und klinischen Hautzustand atopischer und gesunder Hunde.
Tretter S.

Measurement of transepidermal water loss from clipped and unclipped anatomical sites on the dog.
Oh W.-S. and Oh T.-H.

Effects of a supplemental yeast culture on heat-stressed lactating Holstein cows.
Shwartz G., Rhoads M.L., VanBaale M.J., Rhoads R.P. and Baumgard L.H.

A Re-Evaluation of the Impact of Temperature Humidity Index (THI) and Black Globe Humidity Index (BGHI) on Milk Production in High Producing Dairy Cows.

Water exchange and permeability properties of skin in three species of amphibious sea snakes (Laticauda spp.)
Lillywhite H.B., Menon J.G., Menon G.K., Sheehy 3rd C.M. and Tu M.C.

Profile of the bovine acute-phase response following an intravenous bolus-dose lipopolysaccharide challenge

Chronic ethanol ingestion alters xenobiotic absorption through the skin: Potential role of oxidative stress
Brand R.M. and Jendrzejewski J.L.

Olopatadine ameliorates rat experimental cutaneous inflammation by improving skin barrier function
Tamura T., Matsubara M., Amano T. and Chida M.

Potential mechanisms by which a single drink of alcohol can increase transdermal absorption of topically applied chemicals
Brand R.M., Jendrzejewski J.L. and Charron A.R.

Olopatadine hydrochloride accelerates the recovery of skin barrier function in mice
Amano T., Takeda T., Yano H. and Tamura T.

Cutaneous water loss and lipids of the stratum corneum in dusky anticirds, a lowland tropical bird Munos-Garcia A. and Williams J.B.

Transepidermal water loss reflects permeability barrier status: validation in human and rodent in vivo and ex vivo models
Fluhr J.W., Feingold K.R. and Elias P.M.

Abstracts
Skin permeability and water relations of sea snakes
Lillywhite H.B., Babonis L.S., Shhehy C.M. and Tu M.-C.

Sweating rate of dairy cows under shade and sunny environments
Gebremedhin K.G., Hillman P.E., Lee C.N. and Collier R.J.
Presented at American Society of Agricultural and Biological Engineers Annual Meeting, 2007.

Regional differences in sweat rate response of steers to short-term heat stress
Spiers D.E., Wax L.E., Scharf B. and Aiken G.E.

Effects of ambient temperature and solar radiation on skin evaporative water loss in dairy cattle
Pollar B.C., Dwyer, M.E., Fitzgerald A.C., Gentry P.C., Henderson D.A. and Collier R.J.

Impact of alcohol consumption on the skin as determined by non-invasive bioengineering tools
Effects of ambient temperature and solar radiation on skin evaporative water loss in dairy cattle
Pollard, B. C., Dwyer, M. E., Fitzgerald, A. C., Gentry, P. C., Henderson, D. A. and Collier, R. J.

Heat dissipation in winter-acclimated lactating cows and non-lactating heifers subjected to increased ambient temperature and solar radiation in Arizona

In-vitro studies

Magnetophoresis for enhancing transdermal drug delivery: Mechanistic studies and patch design.
Murthy, S.N., Sammeta S.M. and Bowers C.

Evaluation needle length and density of microneedle arrays in the pretreatment of skin for transdermal drug delivery
Yan G., Warner K.S., Zhang J., Sharma S. and Gale B.K.

Microchannels created by sugar and metal microneedles: Characterization by microscopy, macromolecular flux and other techniques.
Li G., Badkar A., Kalluri H. and Banga A. K.

Transdermal iontophoretic delivery of terbinafine hydrochloride: Quantitation of drug levels in stratum corneum and underlying skin.
Sachdeva V., Siddiju S., Yu Y.-Y., Kim H.D., Friden P.M. and Banga A.K.

Transdermal and intradermal iontophoretic delivery of dexamethasone sodium phosphate: quantification of the drug localized in skin.
Paturi J., Kim H.D., Chakraborty B., Friden P.M. and Banga A.K.

Transdermal delivery of fentanyl from matrix and reservoir systems: Effect of heat and compromised skin.
Prodduturi S., Sadrieh N., Wokovich A.M., Doub W.H., Westenberger B. J. and Buhse L.

Microneedle Arrays Allow Lower Microbial Penetration Than Hypodermic Needles In Vitro.

Poly(amidoamine) dendrimers as skin penetration enhancers: Influence of charge, generation, and concentration.
Venuganti V.V.K. and Perumal O.P.

OcuDrain™ - A noninvasive technique for reduction of intraocular pressure.
Murthy S.M., Sammeta S.M. and Vaka S.R.K.

Skin penetration enhancement by a microneedle device (Dermaroller®) in vitro: Dependency on needle size and applied formulation.
Badran M.M., Kuntsche J. and Fehr A.

Reservoir based fentanyl transdermal drug delivery systems: effect of patch age on drug release and skin permeation.

Molecular charge mediated transport of a 13 kD protein across microporated skin
Katikaneni S., Badkar A., Nema S and Banga A.K.

Films based on chitosan polyelectrolyte complexes for skin drug delivery:Development and characterization
Silva C.L., Pereira J.C., Ramalho A., Pais A.C.C.C., Sousa J.J.S.

Effect of poly(amidoamine) (PAMAM) dendrimer on skin permeation of 5-fluorouracil
Venuganti V.V.K. and Perumal O.P.

Interaction of lipid nanoparticles with human epidermis and an organotypic cell culture model
Kuntsche J., Bunjes H., Fehr A., Pappinen S., Rönkkö S., Suhonen M. and Urtti A.

Qualitative and quantitative comparison of heat separated epidermis and dermatomed skin in percutaneous absorption studies
Atrxus-Tallau N., Pirot F., Falson F., Roberts M.S. and Maibach H.I.

In vitro human skin model to evaluate water permeability and determine wound dressings’ occlusivity
Zhai X., Yokota M. and Maibach H.I.

Vitamin C enhances differentiation of a continuous keratinocyte cell line (REK) into epidermis with normal stratum corneum ultrasructure and functional permeability barrier
Formation of permeability barrier in epidermal organotypic culture for studies on drug transport

**Validation articles**

Tape-stripping method in man: comparison of evaporimetric methods
Zhai H., Dika E., Goldovsky M. and Maibach H.I.

Measurement of transepidermal water loss by closed-chamber systems
Nuutinen J.

Comparative evaporimetry in man
Shah J.H., Zhai H. and Maibach H.I.

Validation of the VapoMeter, a closed unventilated chamber system to assess transepidermal water loss vs. the open chamber Tewameter
De Paepe K., Houben E., Adam R., Wieswmann F. and Rogiers V.

Water loss through lip, nail, eyelid skin, scalp skin and axillar skin measured with a closed-chamber evaporation principle

A closed unventilated chamber for the measurement of transepidermal water loss

**Abstracts**

Applicability of the closed unventilated VapoMeter to assess transepidermal water loss (TEWL) on nasolabial skin areas
De Paepe, K., Houben, E., Adam, R., Wiesemann, F. and Rogiers, V.

Comparison of two methods for TEWL measurement
Shah J.H., Zhai H., Maibach H.I. and Nuutinen J.

Measurement of water evaporation rates with a closed chamber TEWL meter
Nuutinen, J., Alanen, E. and Lahtinen, T.
MoistureMeter D

Lymphedema

Randomised phase II trial of hyperbaric oxygen therapy in patients with chronic arm lymphoedema after radiotherapy for cancer.

Local Tissue Water in At-Risk and Contralateral Forearms of Women with and without Breast Cancer Treatment-Related Lymphedema.
Mayrovitz H.M., Weingrad D.N. and Davey S.

Assessing lymphedema by tissue indentation force and local tissue water.
Mayrovitz H.N.

Suitability of single tissue dielectric constant measurements to assess local tissue water in normal and lymphedematous skin
Mayrovitz H.N., Davey S. and Shapiro E.

Local tissue water assessed by tissue dielectric constant: anatomical site and depth dependence in women prior to breast cancer treatment-related surgery.
Mayrovitz H.N., Davey S. and Shapiro E.

Localized tissue water changes accompanying one manual lymphatic drainage (MLD) therapy session assessed by changes in tissue dielectric constant inpatients with lower extremity lymphedema.
Mayrovitz H.N., Davey S. and Shapiro E.

Assessing local tissue edema in postmastectomy lymphedema.
Mayrovitz H.N.

A new water-specific technique for local measurement of edema and lymphedema induced by cancer therapy
Lahtinen T., Nuutinen J. and Mayrovitz H.N.

Abstracts

A novel MoistureMeter D for local assessment of lymphedema
Niinimäki M., Nuutinen J. and Lahtinen T.

Local tissue water changes accompanying a single manual lymphatic drainage (MLD) treatment in patients with lower extremity lymphedema
Mayrovitz H.N., Davey S. and Shapiro E.

Local tissue water assessed by tissue dielectric constant: anatomical site and depth dependence in women prior to breast cancer related surgery
Mayrovitz H.N., Davey S. and Shapiro E.

Assessment of local tissue edema in arms of women with postmastectomy lymphedema
Mayrovitz H.N. and Brown-Cross D.
2006 Symposium on Advanced Wound Care & Medical Research Forum on Wound Repair, p.189

Cutaneous edema, Tissue fluid status

Male–female differences in forearm skin tissue dielectric constant.
Mayrovitz H. N., Carson S. and Luis M.

5-Aminolevulinic Acid-based Photodynamic Intense Pulsed Light Therapy Shows Better Effects in the Treatment of Skin Photoaging in Asian Skin.
Yang G., Xiang L.H. and Gold M.H.

Noninvasive transcutaneous sampling of glucose by electroporation
Murthy S.S., Kiran V.S.R., Mathur S.K. and Murthy S.N.

Chronic ethanol ingestion alters xenobiotic absorption through the skin: Potential role of oxidative stress
Brand R.M. and Jendrzejewski J.L.

Moisturizing lotions can increase transdermal absorption of the herbicide 2,4-dichlorophenoxyacetic acid across hairless mouse skin
Brand R.M., Charron A.R., Sandler V.L. and Jendrzejewski J.L.

Potential mechanisms by which a single drink of alcohol can increase transdermal absorption of topicaly applied chemicals
Brand R.M., Jendrzejewski J.L. and Charron A.R.
Skin tissue water and laser Doppler blood flow during a menstrual cycle
Mayrovitz H.N., Brow-Cross D. and Washington Z.

Measurement of oedema in irritant-exposed skin by a dielectric technique
Miettinen M., Mönkkönen J., Lahtinen M.R., Nuutinen J. and Lahtinen T.

Validation of a new dielectric device to assess changes of tissue water in skin and subcutaneous fat
Nuutinen J., Ikäheimo R. and Lahtinen T.

Dielectric constant of skin and subcutaneous fat to assess fluid changes after cardiac surgery
Petäjä L., Nuutinen J., Uusaro A., Lahtinen T. and Ruokonen E.

Quantitative assessment of protein content in irradiated human skin

Abstracts
Impact of alcohol consumption on the skin as determined by non-invasive bioengineering tools
Brand R.M., Jendrzejewski J.L. and Charron A.R.
Society of Toxicology Meeting, March 2006.

Water content at skin surface and in whole skin during irritant skin reaction

Measurement of skin edema by a dielectric technique (MoistureMeter-D)
Miettinen M., Lahtinen M-R., Nuutinen J., Lahtinen T. and Niinimäki M.

EdemaMeter - a new device to detect tissue edema in skin and subcutaneous tissues
Lahtinen T., Ikäheimo R., Lampainen E. and Nuutinen, J.

Radiotherapy
A dielectric method for measuring early and late reactions in irradiated human skin
Nuutinen J., Lahtinen T., Turunen M., Alanen E., Tenhunen M., Usenius T. and Kolle R.

Skin dielectric constant at high radiofrequency with special emphasis on radiation-induced late skin reaction
Nuutinen, J.

Burns, Thermal injury
Dielectric measurement in experimental burns: A new tool for burn depth determination?
Soo C. and Garner W.L.

Dielectric measurement in experimental burns: a new tool for burn depth determination?
Papp A., Lahtinen T., Harma M., Nuutinen J., Uusaro A. and Alhava E.

Experimental thermal injury: New methods in assessing tissue damage
Papp A.
Kuopio University Publications D. Medical Sciences 356. 2005. 78 p. MD Thesis

Wound healing
Abstracts
Assessing a Biophysical Device to Predict Pressure Ulcers in Spinal Cord Injury
Bates-Jensen B., Guilhan M., McCreath H, Chun S., Parachuri R and Simon J.
Poster presented at 2nd International Evidence Practice in Wound Care, USA, June 2009.

Initial assessment of tissue water content surrounding pressure ulcers in spinal cord injury patients
Harrow J.J. and Mayrovitz H.N.
2006 Symposium on Advanced Wound Care & Medical Research Forum on Wound Repair, p.73

Weight loss
Changes in abdominal subcutaneous fat water content with rapid weight loss and long-term weight maintenance in abdominally obese men and women
Theoretical background

Male–female differences in forearm skin tissue dielectric constant.
Mayrovitz H. N., Carson S. and Luis M. 

Dielectric properties of the skin
Lahtinen, T., Nuutinen, J., Alanen, E. 

Penetration of electromagnetic fields of open-ended coaxial probe between 1 MHz and 1GHz in dielectric skin measurements
Alanen, E., Lahtinen T. and Nuutinen J. 

Variational formulation of open-ended coaxial line in contact with layered biological medium
Alanen, E. Lahtinen, T. and Nuutinen, J. 

Measurement of dielectric properties of subcutaneous fat with open-ended coaxial sensors
Alanen, E., Lahtinen, T. and Nuutinen, J. 

Dielectric properties of the skin
Lahtinen, T., Nuutinen, J. and Alanen, E. 

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Measurement depths of a skin-water analyzer (MoistureMeter D) 
Kilskinen M., Nuutinen J. and Alanen E. 

MoistureMeter SC

Strontium hexaferrite nanomagnets suspended in a cosmetic preparation: a convenient tool to evaluate the biological effects of surface magnetism on human skin.

Effect of Itch, Scratching and Mental Stress on Autonomic Nervous System Function in Atopic Dermatitis. 
Tran B.W., Papoiu A.D.P., Russoniello C.V., Wang H., Patel T.S.; Chan Y.H. and Yosipovitch G. 

S-Aminolevulinic Acid-based Photodynamic Intense Pulsed Light Therapy Shows Better Effects in the Treatment of Skin Photoaging in Asian Skin. 
Yang G., Xiang L.H. and Gold M.H. 

A pramoxine-based anti-itch lotion is more effective than a control lotion for the treatment of uremic pruritus in adult hemodialysis patients. 

Hydrating effects of moisturizer active compounds incorporated into hydrogels: in vivo assessment and comparison between devices 
J Cosmet Dermatol, published online 17 Feb 2009.

Noninvasive transtrnecutaneous sampling of glucose by electroporation 
Murthy S.S., Kiran V.S.R., Mathur S.K. and Murthy S.N. 

The use of an extended ventilation tube as a countermeasure for EVA-associated upper extremity medical issues 

Measurement of hydration in the stratum corneum with the MoistureMeter and comparison with the Corneometer 
Alanen E., Nuutinen J., Nicklén K., Lahtinen T. and Mönkkönen J. 

Dielectric properties of the skin
Lahtinen, T., Nuutinen, J., Alanen, E. 

Penetration of electromagnetic fields of open-ended coaxial probe between 1 MHz and 1GHz in dielectric skin measurements 
Alanen, E., Lahtinen T. and Nuutinen J. 

Variational formulation of open-ended coaxial line in contact with layered biological medium 
Alanen, E. Lahtinen, T. and Nuutinen, J. 

Dielectric properties of the skin
Lahtinen, T., Nuutinen, J. and Alanen, E. 
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Mechanism of injury and countermeasures for EVA associated upper extremity medical issues: Extended Vent Tube Study

The moisturization ability of a sodium sulfacetamide (10%)/sulfur (5%) emollient foam
Trumbore M

Water content at skin surface and in whole skin during irritant skin reaction

Requirements for the conductivity measurements of the MoistureMeter
Alanen, E., Nuutinen, J. and Nicklén, K.

Susceptibility to SLS irritation: Effect of a five-day pre-use of two skin care oils studied comparing various techniques and instruments
Rantanen, T., Snellman, E. and Kostiainen M.
First World Congress on Work-Related and Environmental Allergy. 9-12 July 2003: p. 95.

Pressure-controlled measurement of skin surface hydration with MoistureMeter
Nuutinen, J., Alanen, E. and Nicklén, K.