



CHEMOTECHNIQUE
DIAGNOSTICS



Patch Testing & Contact Allergy

Introduction to Patch Testing



Chemotechnique

Chemotechnique MB Diagnostics AB (“Chemotechnique”) provides all tools required to perform patch tests the IQ way - the gold standard for diagnosing contact allergy.

Contact Allergy & Allergic Contact Dermatitis



Contact allergy is the result of specific immune responses caused by **antigens**. Unlike **allergens** (such as pollens and animal proteins) causing other forms of allergy, the culprits of Contact Allergies, **haptens**, are not antigens by themselves. **Haptens** (typically small, chemically reactive molecules with low molecular weight) need to penetrate the horny layer of the skin in order to conjugate to epidermal and dermal proteins forming “hapten-carrier complexes” with antigenic properties capable of causing contact allergy.

Allergic Contact Dermatitis (ACD) is a disease of the skin that emerges in people that are exposed to specific haptens after having developed contact allergy. Once allergic, the subject will respond with skin inflammation (redness, flaking skin or blisters) whenever exposed. Examples of widely recognized haptens include nickel and preservatives in cosmetics.

Individuals handling haptens as part of their profession run a higher risk of developing **ACD**. ACD accounts for 20% of all reported work related skin diseases. Occupational fields with high occurrences of ACD include (but are not limited to) hairdressing, construction work, cleaning and health care. Chronic once developed, and with no known cure, contact allergy is of major distress for those affected.

Diagnosis

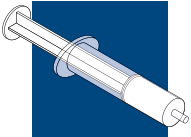


While contact allergy cannot be treated it can be diagnosed; by **patch testing** and not by **skin allergy testing** (such as skin prick testing - used for the diagnosis of i.e respiratory allergies). Knowing what hapten is causing the allergic reactions helps the patient stay clear of that specific hapten, avoiding **ACD** and thereby effectively improving the quality of life for the individual.

Patch Testing

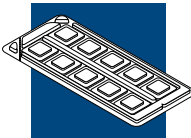
In order to perform a diagnostic patch test, two components are required; **haptens** and **patch test units**.

Haptens



The hapten preparations used in patch testing should ideally be specifically developed for patch testing purposes. The acclaimed patch test hapten preparations manufactured by Chemotechnique are prepared by mixing high purity fine particle ground raw material with high grade white petrolatum.

Patch Test Units

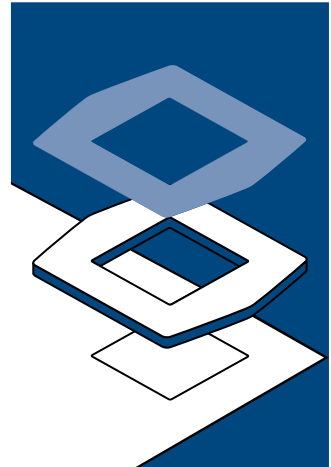
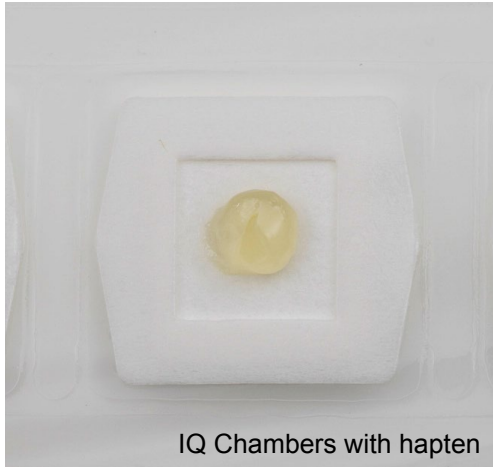


To ensure that the hapten remains in direct contact with the skin for the time required (48h) to create a standardized controlled reaction, a patch test unit is needed. A patch test unit is composed of sets of chambers mounted on an adhesive tape.

The purpose of the patch test chambers is to provide a defined area in which the skin will be exposed to the haptens during the testing. Due to the nature of patch testing it is important that the patch test units used have good occlusion to the skin and that they are made of inert materials that do not interfere with the haptens tested.

The **IQ Ultimate™** and **IQ Ultra™** patch test units produced by Chemotechnique are the result of 30 years of patch test research and have set the standard for professional patch testing.

IQ Patch Test Chambers



IQ - Inert Quadrate

The Inert Quadrate (IQ) chambers are the most technologically advanced patch test chambers ever developed. The laminated tape/foam/filter paper construction results in a comfortable chamber providing a unique closed-cell and leak-free system which defines a test area.

The quadrate shape allows for easy differentiation between allergic and irritant reactions. This patented patch test chamber design is found in both **IQ Ultra™** and **IQ Ultimate™** patch test units. The integrated filter papers makes handling of loose filter papers unnecessary.

Adhesive chamber rim



The adhesive eliminates haptan leakage and enhances the adhesion of the test unit to the skin.

Integrated filter paper



The integrated filter paper facilitates easy handling of liquid haptens.

Foam frame for high comfort



The chambers are made of inert additive free soft polyethylene foam.

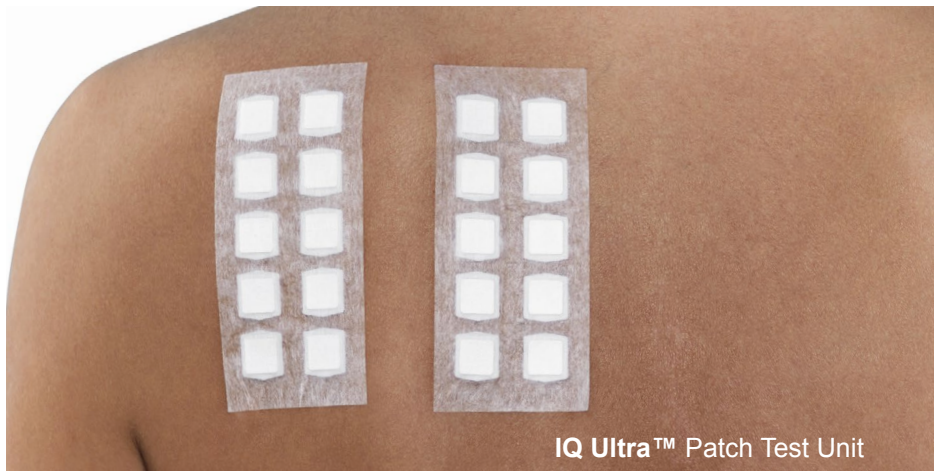
Specifications

IQ Chamber:
Inside area: 64 mm²
Chamber volume: 32 μ l



Rows of IQ chambers inside an
IQ Ultimate™ patch test unit

IQ Patch Test Units



IQ Ultra™ Patch Test Unit

IQ Ultra™

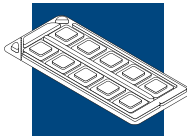
Comfortable and chemically inert - **IQ Ultra™** is the reliable patch test choice. The acclaimed IQ chambers are mounted on a premium quality, hypoallergenic and latex free carrier tape. The strong adhesive properties of the unit eliminates the need for reinforcing tape for all cases involving normal skin. The **IQ Ultra™** test units are most cost effective; with integrated protective covers and filter papers there is no need to purchase extra items.

IQ Chambers



The **IQ Ultra™** patch test unit is designed to take full advantage of the IQ chambers. With strong adhesion and compact size it is a versatile and reliable patch test unit.

Preloadable



Preloading helps maximize staff efficiency as multiple tests can be prepared in advance. By using the **Application Device**, loading of the test units is made efficient and time saving.

Closed-cell & Leak-free



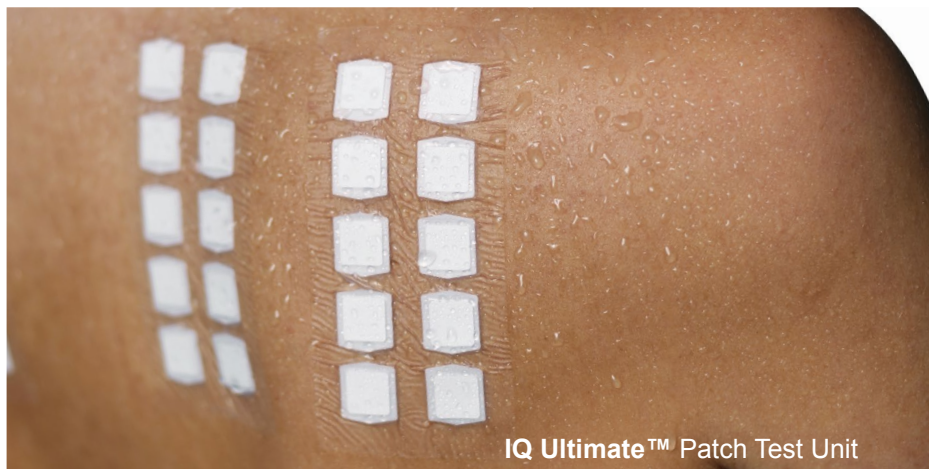
The closed-cell chamber provides a defined test area for standardized testing as the concept of dose/area can be used.

Aluminum free



No aluminum means no risk of chemical reaction between the hapten and the patch test chamber. No uncomfortable metal chambers. Aluminum free means environmentally safe.

IQ Patch Test Units



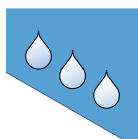
IQ Ultimate™ Patch Test Unit

IQ Ultimate™

Elastic, transparent and water resistant.

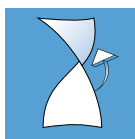
In addition to the features shared with the patch test unit **IQ Ultra™**, **IQ Ultimate™** has the above named added benefits as a result of the 25 micron thin carrier film. **IQ Ultimate™** is the ideal patch test chamber unit for children and active patients - allowing for both exercise and showers. **IQ Ultimate™** is the perfect choice for tropical climate and testing during hot summers due to its superior adhesion to the skin.

Water resistant



The **IQ Ultimate™** carrier tape is water resistant allowing for exercise and showers during the patch test procedure.

Highly elastic



The elasticity of the **IQ Ultimate™** carrier tape permits the patient to continue an active lifestyle during the test.



IQ Ultra™/IQ Ultimate™:

The box includes 100 Patch Test Units along with a **Reading Plate**.

Patch Test Unit:

Size: 52 x 118 mm

Chambers/Unit: 10 pcs

Patch Test Haptens

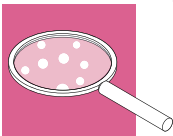


Hapten

Chemotechnique offers the widest range of commercially available high quality haptens. The 575+ different preparations are available for purchase in sets of series or as individual preparations. The petrolatum based preparations are supplied in a 5 ml polypropylene syringe and the liquid solutions are supplied in 8 ml polyethylene dropper bottles.

The composition of each of the 47 series has been carefully selected in close co-operation with leading dermatology organizations and contact dermatitis research groups.

Highest quality



The haptens are prepared by grinding high purity raw materials down to extremely fine particle size. The ground particles are mixed either with high purity grade white petrolatum or with the appropriate highest purity liquid vehicles.

National Baseline Series



In co-operation with contact dermatitis research groups and local clinics we develop and supply country-specific national baseline series. These are updated frequently, visit chemotechnique.se for the most recent composition developed for your region.



Preloading an IQ Ultimate™ using the Application Device

Series

- European Baseline
- International Comprehensive Baseline
- Bakery
- Corticosteroid
- Cosmetic
- Cutaneous Adverse Drug Reaction
- Dental Screening
- Dental Materials - Patients
- Dental Materials - Staff
- Epoxy
- European Photopatch Baseline
- European Photopatch Extended
- Fragrance
- Hairdressing
- International Standard
- Isocyanate
- Leg Ulcer
- Medicament
- Metal
- (Meth) Acrylate
 - Adhesives, Dental & Other
- (Meth) Acrylate Series
 - Nails Artificial
- (Meth) Acrylate Series - Printing
- Oil & Cooling Fluid
- Photographic Chemicals
- Plant
- Plastics & Glues
- Rubber Additives
- Shoe
- Sunscreen
- Textile Colours & Finish
- Various Haptens
- Supplemental Haptens
- National Baseline

Haptens: ~150 patients per series with normal use. Store dark at 5-8°C.



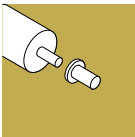
Patch Test Accessories



Application Device

The **Application Device** significantly facilitates preloading multiple test units of **IQ Ultra™** and **IQ Ultimate™**. This is convenient when preparing test series in advance, such as the **Baseline Series**, for a suitable number of patients.

Syringe Cap Organizer

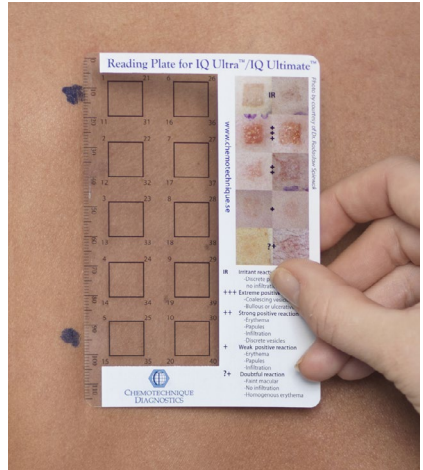


The device is equipped with a special feature facilitating detachment and attachment of the syringe caps without skin contact.

Fixates Patch Test Units



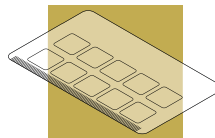
The design prevents the tape unit from sliding during application of the haptens.



Reading Plate

The **Reading Plate for IQ Ultra™/IQ Ultimate™** facilitates reading and the interpretation of the skin reactions.

Easy Diagnosis



To facilitate visual diagnosis, reference pictures of allergic reactions are printed on the Reading Plate. The images are categorized in accordance with the definition recommended by the **International Contact Dermatitis Research Group (ICDRG)**.

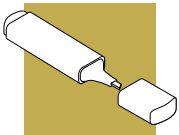
Spot Tests



Skin Marking

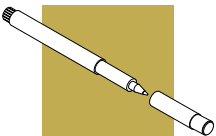
Chemotechnique has developed three different markers to mark the patch test area.

Chemo Skin Marker - Regular™



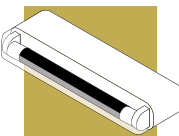
This marker contains methylosaniline and silver nitrate for prolonged staining of the skin.

Chemo Skin Marker - Slim™



This is a slimmer version of **Chemo Skin Marker - Regular™**.

Chemo Skin Marker - UV™



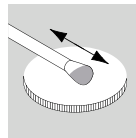
The **Chemo Skin Marker - UV™** paired with the **Ultraviolet Lamp** is suitable for dark skin types or when a non staining marking solution is preferred.



Spot Tests

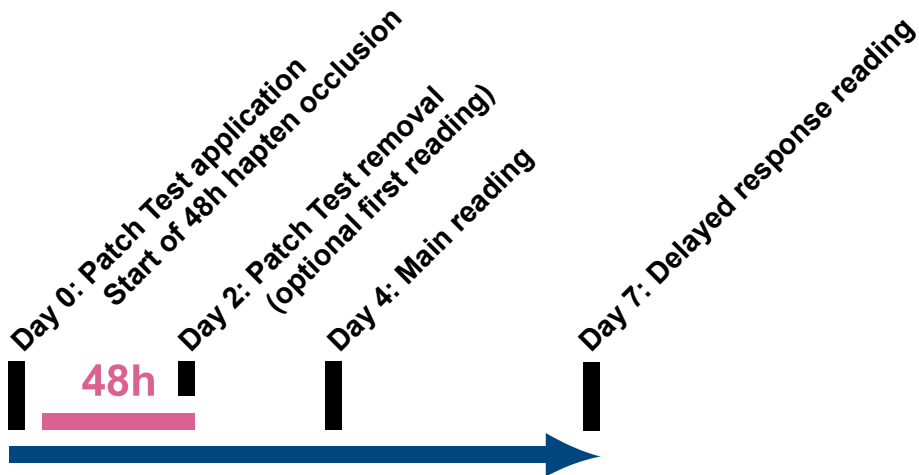
Chemo Nickel Test™ and **Chemo Cobalt Test™** provide easy ways to detect free nickel or cobalt in metallic objects. The one-component products are easily managed with supplied cotton tips.

Rub & Compare



Rub a moistened cotton tip on the suspected metal object and compare the color result to the supplied reference color.

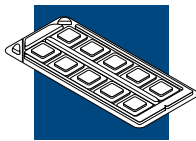
Patch Testing



Patch Testing

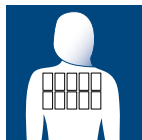
Patch testing for contact dermatitis is a process involving 3 to 4 scheduled patient appointments within a one-week time-frame.

Preloading



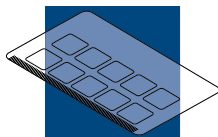
To facilitate the patch test process, **IQ Ultra™/IQ Ultimate™** can be preloaded with most haptens for up to two weeks in advance (volatile substances such as acrylates or fragrances are exempted). By preparing numbers of patch test units in advance, patient interaction can be made efficient.

Patch Test placement



Avoid applying patch test units to the midline and the scapula. Do not put any patch test units under a brassiere shoulder band which can cause dislocation of the test units.

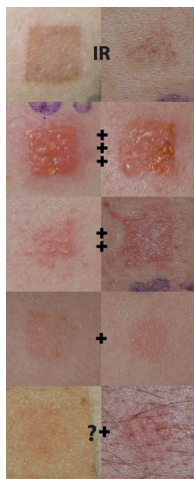
Reading



The main reading should be performed within 48h of the removal of the patch test units. A delayed response reading should be performed a full week (7 days) after the initial test application for haptens that may show delayed reactions.

The reading criteria for morphologically positive patch test reactions defined by the ICDRG is widely acknowledged and used as a reference when diagnosing contact allergic reactions. The reading criteria are visualized below as well as on the **Reading Plate for IQ Ultra™/IQ Ultimate™**.

Pictures courtesy of Dr. Radoslaw Spiewak



IR Irritant reaction

- Discrete patchy erythema without infiltration.

+++ Extreme positive reaction

- Coalescing vesicles • Bullous or ulcerative reaction

++ Strong positive reaction

- Erythema • Infiltration • Papules • Discrete vesicles

+ Weak positive reaction

- Erythema • Infiltration • Papules

?+ Doubtful reaction

- Faint macular • No infiltration • Homogenous erythema

Erythema

In addition to the visual imprints on the skin from each chamber, a slight erythema from the frames should be visible as a sign of good occlusion. The erythema generally subsides within 30 minutes after removal of the test units. The erythema may however prevail for up to 24h for patients with sensitive skin.

Caution



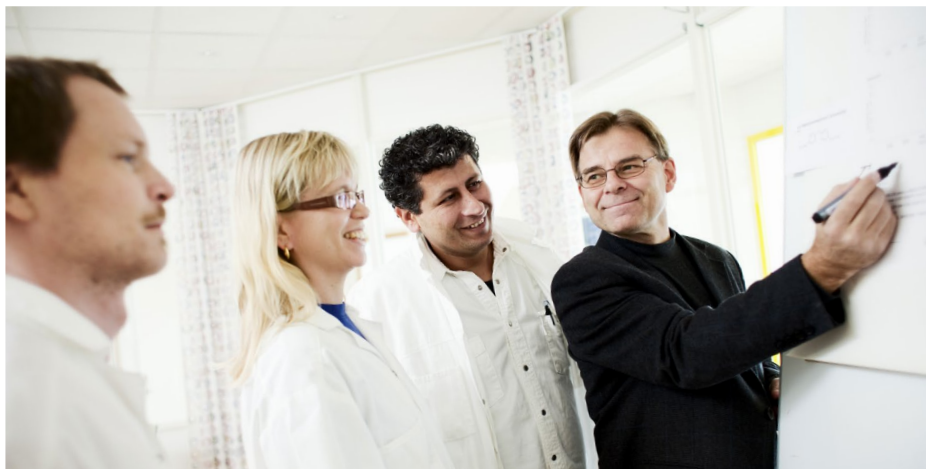
Cortisone medication or medications altering the immune system must be avoided prior to and during the test period. The patch tests should not be exposed to UV light during the tests (with the exception of the photopatch series). If using **IQ Ultra™**: water submersion, showers and exercise should be avoided during the patch test period.

Downloadable content and Patch Test Instructions



For downloadable record forms, patient information sheets and detailed step-by-step patch test instruction; please visit our extensive online resource available free of charge at www.chemotechnique.se

About Chemotechnique



Chemotechnique - The trusted name in Patch Testing



Providing patch test solutions since 1981 we are proud to be recognized as the trusted name in patch testing. Based in the Scania region of Sweden, Chemotechnique is leading the way for patch testing - serving dermatology by supplying our patch test products through our distribution network to over **100 countries**.

Research and Development



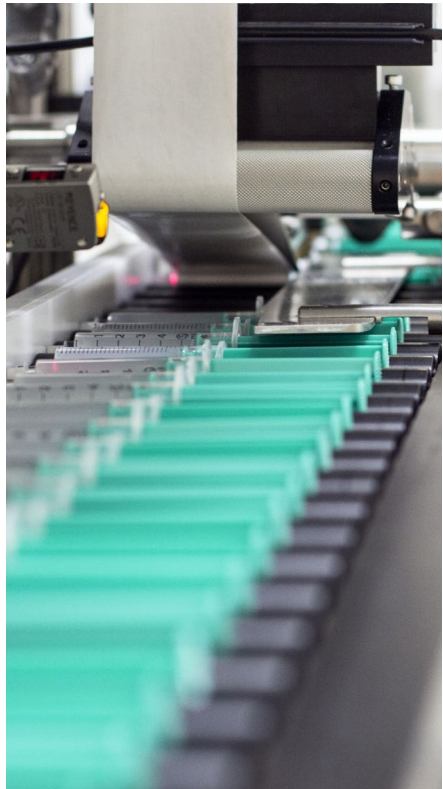
With emphasis on R&D and working in close cooperation with contact dermatitis research groups such as the International Contact Dermatitis Research Group (**ICDRG**), the European Environmental and Contact Dermatitis Research Group (**EECDRG**) and the North American Contact Dermatitis Group (**NACDG**), we ensure that our product line-up has the ideal composition.

Highest quality products



We offer a complete range of high quality patch test products including haptens, patch test units as well as patch test accessories and spot tests. Our haptens are produced in Sweden under strict pharmaceutical control following the **GMP** quality management system audited by the Swedish Medical Products Agency.

Certified by the **ISO 13485** and **ISO 9001** Quality Management systems our high quality products and reliable service will aid you in the diagnosis of contact allergy in your patients.





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DISTRIBUTOR

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