



CHEMOTECHNIQUE
DIAGNOSTICS



Patch Testing & Contact Allergy



1 out of 10 are sensitized to nickel

Contact Allergy

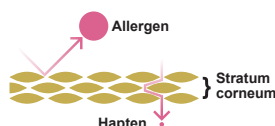
Contact Allergy & Allergic Contact Dermatitis (ACD)



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**. Examples of widely recognized haptens include nickel, formaldehyde and other preservatives in cosmetics.

Contact allergy is the state of being sensitized to a hapten. Sensitization to a hapten occurs when the accumulated exposure to the hapten surpasses a certain threshold. This threshold is individual and varies greatly, some will develop an allergy the first time encountering the hapten while others withstand a life time of exposure without becoming sensitized.

The prevalence of contact allergy to at least one hapten is around 20%¹ in the general population. The most common culprit haptens are **metals** (such as nickel or chromium), **fragrances**, dyes (such as PPD) or preservatives (such as MC/MCI)¹.



Allergic Contact Dermatitis (ACD) is a disease of the skin that can emerge in people that are exposed to specific haptens after having developed contact allergy to them. The annual incidence rate of ACD is 17-70 cases per 10,000 population². Once allergic, the subject might respond with skin inflammation (redness, flaking skin or blisters) whenever exposed. Individuals handling haptens as part of their profession run a higher risk of developing ACD. Occupational fields with high occurrences of ACD include (but are not limited to) hairdressing, construction work, cleaning and health care. ACD accounts for 20% of all reported work related skin diseases and the estimated annual societal costs per case is €3700 - €13800².

Chronic once developed, and with no known cure, Contact Allergy is of major distress for those affected.

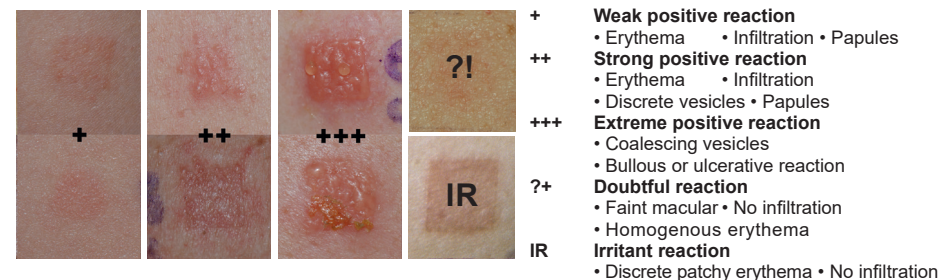
Patch Testing

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, for instance, 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.

The indication for Patch Testing is to **test all patients in whom contact allergy is suspected or needs to be ruled out**, regardless of age or anatomical site of dermatitis.

Reading

Following the patch test procedure a reading of the patch test site is performed following the ICDRG reading criteria to assess the patch test result.



Chemotechnique provides all tools required to perform patch tests the IQ way - the gold standard for diagnosing contact allergy. In order to perform a diagnostic Patch Test, two crucial components are required; **Topical Haptens** and **Patch Test Units**.

Topical Haptens



The hapten preparations used in patch testing should ideally be specifically developed for patch testing purposes. The Topical Haptens manufactured by Chemotechnique are standardized and prepared by mixing high purity fine particle ground raw material with an appropriate vehicle, such as high purity grade white petrolatum, using state of the art technology.

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.

¹Alinaghi et al, 2018, ²ECHA Annex XV Restriction report, skin sensitizing substances, 2019



Topical Haptens

Chemotechnique offers the widest range of commercially available high quality topical haptens. The vast amount of different preparations are available for purchase as individual preparations or in sets of Hapten Series. Hapten Series are divided into two categories, Baseline Series and Screening series.

Baseline Series

The haptens in a Baseline Series form the foundation for all routine patch testing and consists of the most common haptens in a geographic area. Chemotechnique has developed several regional and national Baseline Series in close co-operation with leading international and national Contact Dermatitis societies.

Screening Series

Screening Series are used in combination with a Baseline Series to facilitate the screening of patients with occupational, or recreational, exposure to a defined set of haptens.

The Screening Series include haptens typically associated with occupational fields based on current technical, occupational and scientific information but should not be considered to contain all possible hapten exposures associated with each field.

Highest quality



Haptens are produced using state of the art technology. High purity raw materials in extremely fine particle size are homogenized with high purity grade white petrolatum or with the appropriate highest purity liquid vehicles.

Preloading



Non-volatile Topical Haptens may be preloaded onto **IQ Ultra™** or **IQ Ultimate™** Patch Test Units prior to patient application.

Listed online



The composition of each series is available for review online. See **chemotechnique.se** for current composition.

FAQ

Q: How do I choose which Topical Haptens to test my patients with?

According to the “European Society of Contact Dermatitis guideline for diagnostic patch testing – recommendations on best practice”, all patients suspected of having contact dermatitis should be tested with a Baseline Series. Consider testing patients with known occupational exposure to additional clinically relevant haptens from a Screening Series.

Q: How much does a syringe/bottle contain?



A syringe contains 5 ml of hapten preparation and a bottle contains 8 ml.

Q: How many patients can be tested per syringe/bottle?

Approximately 150 patients (200 25µl doses)

Q: Which volume should I dispense onto each patch test chamber?

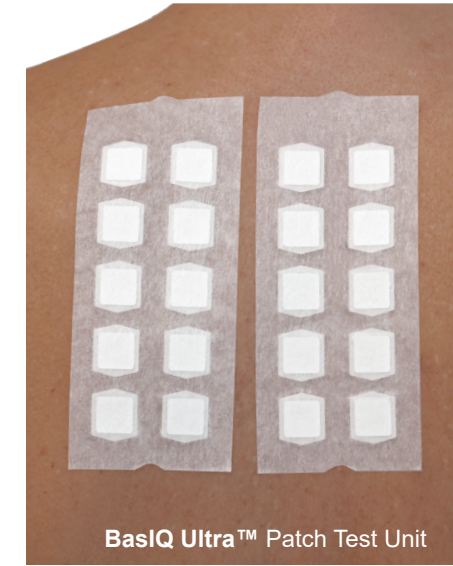
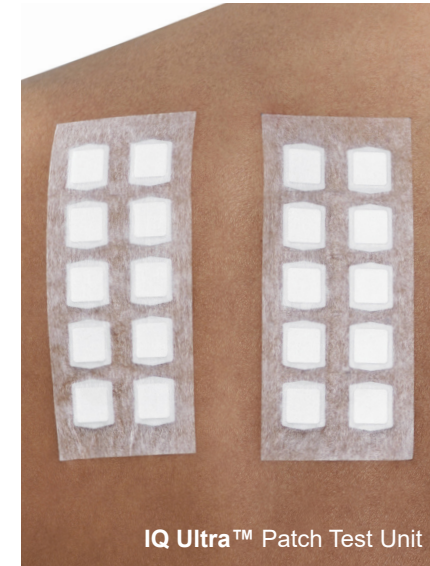


The recommended dose for IQ Chambers is 25 µl. When applying haptens in petrolatum, a 25 µl/20 mg dose corresponds approximately to a 5 mm string of petrolatum. For liquid haptens, the same amount (20-25 µl) is contained in a single drop of liquid hapten. Using a micropipette is however preferred.

Q: What is the shelf life of the haptens?



The shelf life of a hapten depend on its composition. The expiration date is clearly marked on the label of each hapten. All non-volatile haptens will have a minimum of 12 months shelf life when delivered to the clinic. Volatile haptens will have a miumum of 5 months shelf life when delivered to the clinic.



Patch Test Units

Chemotechnique offers three types of Patch Test Units, the **IQ Ultra™**, the **BasIQ Ultra™** and the **IQ Ultimate™**. All three Patch test Unit designs are based on the same patented IQ chamber.

IQ Chamber



The IQ chamber is the result of many years of product development and is most technologically advanced. The comfortable laminated foam construction provides a unique closed-cell system which defines a test area and helps prevent leakage. The quadrate shape allows for easy differentiation between allergic and irritant reactions and the integrated filter papers make handling of loose filter papers redundant.

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Adhesive chamber rim



The non-sensitising medical grade acrylic adhesive helps prevent hapten leakage and enhances the adhesion.

Foam frame for high comfort



The chambers are made of soft polyethylene foam for patient comfort.

Integrated filter paper



The integrated filter paper facilitates handling of liquid haptens.

IQ Ultra™

IQ Ultra™ (IQ-U) is the comfortable and reliable Patch Test Unit choice for the aid of diagnosis of contact allergy. The preloadable **IQ Ultra™** features the acclaimed IQ Chambers mounted on hypoallergenic premium quality carrier tape.

- Preloadable
- Aluminum free
- Hypoallergenic material used



IQ Ultra™

Quantity
100 Test Units
Unit size (mm)
52 x 118 mm
IQ Chambers/ Unit
10 pcs

BasIQ Ultra™

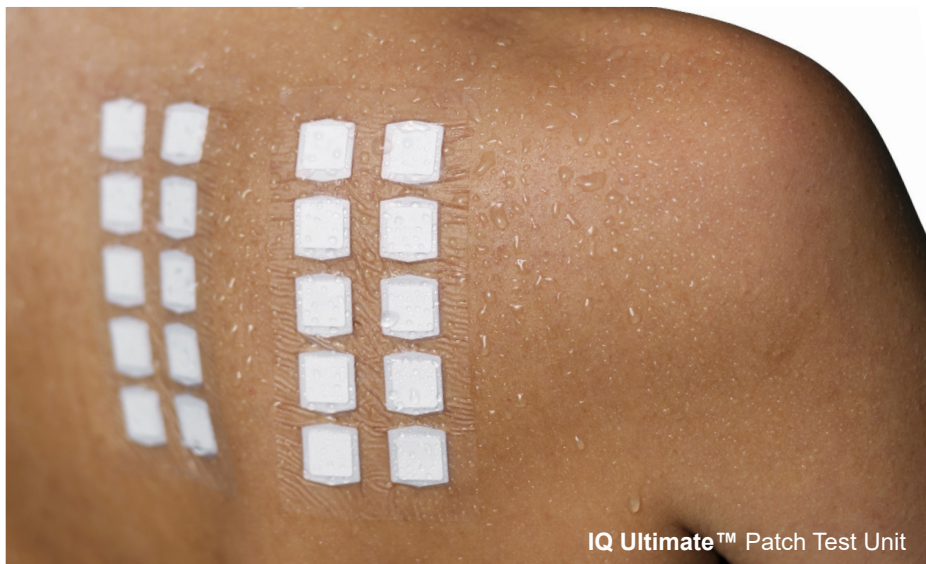
BasIQ Ultra™ (BIQ-U) is a Patch Test Unit especially suited for smaller clinics that do not preload haptens prior to patient appointments or for clinics accustomed to open type Patch Test Units that want to experience the superior IQ experience.

- Aluminum free
- Hypoallergenic material used



BasIQ Ultra™

Quantity
50 Test Units
Unit size (mm)
52 x 125 mm
IQ Chambers/ Unit
10 pcs



IQ Ultimate™ Patch Test Unit

IQ Ultimate™

IQ Ultimate™ (IQ-UL) is the elastic and water resistant Patch Test Unit choice for the aid of diagnosis of contact allergy in active patients. The preloadable IQ Ultimate™ features the acclaimed IQ Chambers mounted on hypoallergenic flexible carrier tape with superior adhesion.

- Water resistant
- Highly elastic
- Preloadable



IQ Ultimate™

Quantity	100 Test Units
Unit size (mm)	52 x 118 mm
IQ Chambers/ Unit	10 pcs



www.chemotechnique.se for both desktop and mobile

FAQ

Q: How many Patch Test Units do I need per patient?



A box of 100 Patch test Units may cover anywhere from 10 to 30 patients depending on use. The number of Patch Test Units needed at a clinic is closely linked to the Baseline Series used for routine screening. For example a Baseline Series with 32 haptens require 4 patches, whereas a Baseline Series with 80 haptens demand 8. The use of Screening Series in addition will further affect this number.

Q: Is there any way to improve adhesion of the Patch Test Units?



Prepare the test site with ethanol. Make sure to always put pressure on the applied test unit with the palm of your hand for at least 5 seconds. The heat and pressure will ensure good adhesion.

Q: What is the shelf life of Patch Test Units?



The expiration date is clearly marked on the label on the Patch Test Unit box. Patch Test Units will have a minimum of 12 months shelf life when delivered to the clinic.

Visit Chemotechnique online for more



Visit www.chemotechnique.se to access the Chemotechnique online resources including an extensive **Hapten Database**, patch testing **Video Instructions**, **Patch test record forms**, **Patient information sheets** and much more. Create a free account today!



Application Device

The **Application Device (AP-P)** significantly facilitates preloading multiple **IQ Ultra™** or **IQ Ultimate™** Patch Test Units. 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 feature that facilitates the detachment and attachment of the syringe caps without skin contact.

Fixates Patch Test Units



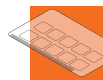
The design prevents the Patch Test Unit from sliding during application of the haptens.



Reading Plate

The **Reading Plate for IQ Ultra™/IQ Ultimate™ (RP-P)** facilitates reading and the interpretation of the skin reactions.

Easy Diagnosis



To facilitate 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)**.



Chemo Skin Marker

The **Chemo Skin Marker Medium™** is a long lasting skin marking tool specially suited for patch test site marking.

Distinct marking



The **Chemo Skin Marker™ - Medium** has a medium round (bullet) type tip for a distinct marking. The skin marker is non-toxic, non-irritating and non-tattooing.

Chemo Skin Markers™-Medium (SMM-4)

Chemo Skin Markers™ - Medium are provided in boxed sets of 4 units



Chemo Spot Test

Chemo Nickel Test™ (NT) and **Chemo Cobalt Test™ (CoT)** are one-component solutions that enable easy detection of free nickel or cobalt in metallic objects.



The tests are contained in a re-sealable packaging, conveniently stored alongside provided swabs.

Rub & Compare



Rub a moistened swab on the suspected metal object and compare the result with the reference color.

Chemo Spot Tests

Volume:
8 ml (50 tests+)
Reagents:
Nickel: Dimethylglyoxime
Cobalt: Nitroso-R salt



CHEMOTECHNIQUE DIAGNOSTICS

Chemotechnique - The trusted name in Patch Testing



Chemotechnique MB Diagnostic AB has provided Patch Test solutions since 1981 and is proudly recognized as the Trusted name in Patch Testing. Chemotechnique is a Sweden based company with global reach through world-wide distribution.

Research and Development



With emphasis on R&D and working in close co-operation 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 (**NACDGD**), Chemotechnique strives to provide a product line-up always up-to-date.

Highest quality products



Chemotechnique offers a complete range of high quality Patch Test Products including Topical 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 the Chemotechnique high quality products and reliable service will aid you in the diagnosis of contact allergy in your patients.

DISTRIBUTOR

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