PATCH TESTING
TRAINING OBJECTIVES

CHEMOTECHNIQUE PATCH TESTING PRODUCTS AND ACCESSORIES
- Chemotechnique Haptens
- IQ Chambers – Ultra & Ultimate
- Accessories
- Storage
- Pre-filling & work space

PATIENT MANAGEMENT
- WHO-WHY-WHAT-WHEN to Patch Test
- HANDS-ON TRAINING:
  - Timelines (0 – 48 – 96 hour) & Scheduling
  - Reading and recording results
  - Irritant vs Allergic dermatitis

SUPPORTING MATERIALS & RESOURCES
- Product ordering
- Resources available from Dormer
  - Dormer.com/allergens
  - Chemotechnique Reference Manual
- ACDS Membership / CAMP
- Metal Allergy Products
CHEMOTECHNIQUE PATCH TESTING
PRODUCTS AND ACCESSORIES
When is an ‘ALLERGEN’ not an ‘ALLERGEN’?

WHEN IT IS A ‘HAPTEN’!

In Contact Dermatitis Patch Testing, the traditionally used “Allergen” should be replaced by the correct descriptor “Hapten”.
ALLERGENS are high molecular weight compounds defined as complete antigens with the capability to elicit Type-1 allergic reactions during prick test procedures.

Some examples of common allergens are pollens, cat dander and dust mites.

HAPTENS are small molecular weight substances incapable of inducing an immunologic reaction in diagnostic in vivo testing as a stand-alone compound. A hapten needs to first bind with a protein, forming a hapten-protein complex, to become an antigen capable of eliciting a Type-4 allergic reaction.

The formation of the hapten-protein complex depends on individual biological factors in the patient.
Why should ‘HAPTEN’ be used?

First, it is the correct scientific description for the substances used in patch testing.

Second, it is important to differentiate “hapten” from “allergen” for regulatory clarity and correct classification.

Throughout this presentation we will use the term “hapten” when referring to the substances used in patch testing.
HAPTENS
Application Device

Position “1”

Position “10”
Reading Plate

Day 0  Day 2  48 Hours  Day 3/4

-  +  ++  +++  IR

Reading Plate for IQ Ultra™/IQ Ultimate

Interpretation:
- Instant reaction
  - Dacrygia
  - No reaction
- + Strong positive reaction
  - Erythema
  - Euphoric
- ++ Strong positive reaction
  - Erythema
  - Euphoric
  - Inflammation
- +++ Extreme positive
  - Erythema
  - Euphoric
  - Inflammation
  - Eulathema
  - Macule
  - Hyperpigmentation
  - Hyperkeratosis

Legend:
- IR: Immediate reaction
- +: Positive reaction
- ++: Strong positive reaction
- +++: Extreme positive reaction
- ?: Indeterminate
### BASIC INTERPRETATIONS

<table>
<thead>
<tr>
<th>Doubtful Reaction</th>
<th>Weak Positive Reaction</th>
<th>Strong Positive Reaction</th>
<th>Extreme Positive Reaction</th>
<th>Irritant Reaction</th>
</tr>
</thead>
<tbody>
<tr>
<td>- Faint macular</td>
<td>- Erythema</td>
<td>- Erythema</td>
<td>- Coalescing vesicle</td>
<td>- Discrete patchy</td>
</tr>
<tr>
<td>- No infiltration</td>
<td>- Papules</td>
<td>- Papules</td>
<td>- Bullous or ulcerative</td>
<td>- Erythema</td>
</tr>
<tr>
<td>- Homogenous erythema</td>
<td>- Infiltration</td>
<td>- Infiltration</td>
<td>- reaction</td>
<td>- no infiltration</td>
</tr>
<tr>
<td></td>
<td></td>
<td>- Discrete vesicle</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

**Images:**
- **Doubtful Reaction:** Images showing faint macular erythema with no infiltration.
- **Weak Positive Reaction:** Images showing erythema, papules, and infiltration.
- **Strong Positive Reaction:** Images showing erythema, papules, infiltration, and discrete vesicle.
- **Extreme Positive Reaction:** Images showing coalescing vesicle, bullous or ulcerative reaction.
- **Irritant Reaction:** Images showing discrete patchy erythema with no infiltration.
- A TABLE OR A COUNTER AREA FOR PREPARATION
- A REFRIGERATOR FOR HAPTEN STORAGE
- STORAGE AREA FOR SUPPLIES
REFRIGERATION
CONTACT DERMATITIS

- 6M+ chemicals in the environment
- 3K+ known to cause CD

- 500+ Haptens available
- 30+ Screening Series
- NA-1000 (50) baseline
- NAE-65 (65) extended
- NAC-80 (80) comprehensive
Patch Testing Children:
Although opinions vary, the overall consensus is that children can be patch tested safely. The only consideration is technical; i.e., the reduced number of patches you can apply on their small back. Irritant reactions seem to be more frequent with children under 5 years of age. Compliance is also reduced with kids under 5 years.

Patch Testing During Pregnancy:
There is no evidence that patch testing is harmful; however it is selective and should wait until after pregnancy is completed.
PATIENT HISTORY ⇒ HAPTEN SELECTION

Initial patient visit

Day 0

Patient interview
Patient history
What haptens are appropriate?

500+ haptens

North American Screening Series
NA-1000 – Basline (50)
NAE-65 – Extended (65)
NAC-80 – Comprehensive (80)

30+ Targeted Series
e.g., Bakery, Cosmetic, Metals, etc.

Initial Patient Counselling
EXPLANATION OF THE PROCEDURE WILL ENSURE GREATER COMPLIANCE

♦ PLACEMENT OF CHAMBERS
♦ DURATION
♦ WHAT TO EXPECT (e.g., itching)
♦ CLOTHING
♦ BATHING
♦ EXERCISING
♦ MEDICATIONS TO AVOID

Provide them with a hardcopy of this information to take home and read.
“Day 0” should be scheduled in tandem with availability of the selected haptens ... allow time for necessary hapten orders to be delivered (4 weeks)

Mondays are best for ‘Day 0’ as it allows the two remaining visits to occur in the same week (Mon-Wed-Fri)
PRE-FILLING CHAMBERS

Initial patient visit → Day 0 → Day 2 → Day 3/4

NAC-80 NORTH AMERICAN COMPREHENSIVE SERIES
80 HAPTENS / EFFECTIVE 1-1-2017

© 2015 Chemotechnique MB Diagnostics AB
The skin must be dry and clean
Avoid active ACD on back
Excessively hairy patients must shave the area prior to testing
The skin should be free of fragrances, creams
The skin may be cleaned with warm water and dried gently
APPLICATION

Day 0 Day 2 Day 3/4
M W Th/F
APPLICATION - special attention to numbering

Position “1”

Position “10”
MARKING

Day 0  
Day 2  
48 Hours  
Day 3/4
48 HOURS OF EXPOSURE TO HAPTENS

*** Recommendation: re-mark skin before removal ***
REMOVAL

Day 0 → Day 2

48 Hours

Day 3/4
PRELIMINARY READING – DAY 2

Day 0 → Day 2 (48 Hours) → Day 3/4
IRRITANT CONTACT DERMATITIS (ICD)
- Results from harsh chemicals, solvents
- The reaction is almost immediate
- WILL SUBSIDE ONCE THE EXPOSURE HAS STOPPED

ALLERGIC CONTACT DERMATITIS (ICD)
- Manifestation of allergic response caused by contact with fragrance, nickel, preservatives, etc.
- ACD is acquired, it can occur after many months or years of exposure.
- Once occurred, allergy is permanent.
MAIN DIAGNOSTIC READING – Day 3/4

Day 0  Day 2  48 Hours  Day 3/4

Reading Plate for IQ Ultra™/IQ Ultimate®
Recording results - Test Form

DAY 2
PRELIMINARY READING

DAY 4
MAIN READING

PATCH TESTING: PATIENT TEST RESULTS

Patient Name: ____________________________ ID#: ____________________________
Panel Placement: ________________________ (date/time) Panel Removal: _________________ (date/time)

Read Date #1: ______________ Read Date #2 ______________ Read Date #3 ______________ Read Date #4: ______________

NAC-80 North American 80 Comprehensive Series

<table>
<thead>
<tr>
<th>#</th>
<th>Article#</th>
<th>Veh/Conc</th>
<th>Description</th>
<th>Readings</th>
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<tbody>
<tr>
<td>1</td>
<td>B-004</td>
<td>5.0 pet</td>
<td>Benzocaine</td>
<td>#1 #2 #3</td>
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<tr>
<td>2</td>
<td>M-003B</td>
<td>1.0 pet</td>
<td>2-Mercaptobenzothiazole (MBT)</td>
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<tr>
<td>3</td>
<td>C-020</td>
<td>20.0 pet</td>
<td>Colophonium / (Colophony)</td>
<td></td>
</tr>
<tr>
<td>4</td>
<td>P-006</td>
<td>1.0 pet</td>
<td>p-Phenylenediamine (PPD)</td>
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<tr>
<td>5</td>
<td>I-001A</td>
<td>2.0 pet</td>
<td>Imidazolidinyl urea Germall 115</td>
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<tr>
<td>6</td>
<td>C-014</td>
<td>1.0 pet</td>
<td>Cinnamal / (Cinnamic aldehyde)</td>
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<tr>
<td>7</td>
<td>A-004</td>
<td>50.0 pet</td>
<td>Amerchol L 101</td>
<td></td>
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<tr>
<td>8</td>
<td>Mx-06</td>
<td>3.0 pet</td>
<td>Carba mix</td>
<td></td>
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<tr>
<td>9</td>
<td>N-001</td>
<td>20.0 pet</td>
<td>Neomycin sulfate</td>
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<td>10</td>
<td>MX-01</td>
<td>1.0 pet</td>
<td>Thiram mix</td>
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<tr>
<td>11</td>
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<td>Clobetasol-17-petrolide</td>
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<tr>
<td>12</td>
<td>5-005</td>
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<td>Ectodermal-dermal</td>
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Readings: #1 + #2 ++ #3 +++ IR
RESOURCES
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<tr>
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<td>Details</td>
<td>C-1000</td>
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<td>CAD-1000</td>
<td>Cutaneous Adverse Drug Reaction Series</td>
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<td>CS-1000</td>
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<td>E-1000</td>
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<td>NAC-80</td>
<td>North American 80 Comprehensive Series</td>
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<td>North American 65 Extended Series</td>
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### Order-Quote Hapten Series

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<thead>
<tr>
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<th>Article No</th>
<th>Article Description</th>
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<th>Quantity</th>
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<tr>
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<td>NAC80-1</td>
<td>E-004</td>
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<tr>
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<td>NAC80-13</td>
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<td>Epoxy resin Bisphenol A</td>
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<td>Article</td>
<td>Article Description</td>
<td>Conc</td>
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<tr>
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<td>Abietic acid</td>
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<tr>
<td>A-002</td>
<td>Hydrocycetyl alcohol / (Abitol)</td>
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<td>A-003B</td>
<td>Alantolactone</td>
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<tr>
<td>A-004</td>
<td>Amerchol L 101</td>
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<td></td>
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<tr>
<td>A-005</td>
<td>4-Aminobenzoic acid</td>
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<tr>
<td>A-006A</td>
<td>PABA / (4-Aminobenzoic acid)</td>
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<tr>
<td>A-006B</td>
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<td>5.0 pet</td>
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<td></td>
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<tr>
<td>A-006C</td>
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<tr>
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<td></td>
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<tr>
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<tr>
<td>C-015</td>
<td>Cloquinol (Chinoform, Vicform)</td>
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<tr>
<td>C-016</td>
<td>Coal tar</td>
<td>5.0 pet</td>
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</table>
Search results for c-014 cinnamal / (cinnamic aldehyde) resulted in 1 Haptens / Allergens being found.
ORDERING HAPTENS – obtain quote

* Recommendation: request quote, then place order following detailed review
ORDERING HAPTENS – by FAX

Customer Number: ____________ Purchase Order Number: ____________ Date: ____________

Tel No: ______________________ Fax No: ______________________ Email Address: ______________________

Shipping Information

Name of Practice: ______________________

Name of Doctor: ______________________

Contact Name: ______________________

Street Address: ______________________

City: ______________________ State: ______________________ ZIP: ______________________

Payment Options:

Credit Card Number: ____________

Expiry Date (MM/YY): ____________

Name on Card: ______________________

Payment Options:   Visa   Mastercard   American Express

Information and Ordering Instructions:

1. To order a complete series: Please use the series number. (example C5-1000, NA-1000)
2. To order an individual allergen(s): Please use the article number (example T-031), if applicable add the suffix "B" or "C" to denote concentration (example T-031B).

Shipping and handling charges will be added to the invoice. Please allow 3-4 weeks for delivery of allergens.

You can place an order or obtain a quotation at www.dormer.com

<table>
<thead>
<tr>
<th>Series No.</th>
<th>Article No.</th>
<th>Chemical Name</th>
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<tr>
<td>NAC80-B</td>
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<td>Cinnamal</td>
<td>1</td>
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</table>

Mar-14
ORDERING HAPTENS – No orders over the phone

WHY WE DO NOT TAKE ORDERS OVER THE PHONE

- Many chemical names sound similar to others
- Order items can be numerous
- Conditions are ideal for mix-ups and misunderstandings

WE DO WELCOME YOUR TELEPHONE CALLS TO PROVIDE ASSISTANCE WITH COMPLETING YOUR ORDERS
RECEIPT OF HAPTENS

Initial patient visit

Day 0  Day 2  Day 3/4

** CHECK YOUR ORDER **
RESOURCES: SUPPORT MATERIAL

- Catalogue & Reference Manual
- Patch Testing Information for Patient
- Test Results Form
- Patient Information Sheets
- Safety Data Sheets
- Patient History Record Sample
- Consent form samples
Meetings & Conventions

29th Annual Meeting of the American Contact Dermatitis Society
website: www.contactderm.org (ACDS) Thursday, February 15th, 2018
San Diego, CA
Location and meeting details to follow
Meeting and Exhibit hours: 7am Registration open - Meeting ends 5pm followed by Networking

76th Annual Meeting of American Academy of Dermatology
website: www.aad.org - 2017 annual meeting (AAD)
February 16th through 18th, 2018
San Diego Convention Center
San Diego, CA 92101
Telephone: (202) 249-3000
Exhibit Hours:
- Friday February 16th 10.00 am-5.00 pm
- Saturday February 17th 10.00 am-5.00 pm
- Sunday February 18th 10.00 am-3.00 pm
Visit: Chemotechnique Diagnostics AB / Dormer Laboratories Inc., Booth 2916

92nd Annual Meeting of Canadian Dermatology Association
June 21st through - 24th, 2017
Fredericton, NB (Site and schedule to be determined)

Announcements

Chemotechnique Diagnostics (CT) is recognized as the world's leading patch test company with the most complete range of 550 haptenes distributed in over 90 countries. These contamination free haptenes, test chambers and accessories are produced under stringent GMP pharmaceutical controls. CT functions under the ISO13485 and ISO9001 Quality Management systems. CT is audited and licensed by the Medical Products Agency (MPA), “Sweden’s FDA”. CT is committed to the global advancement of contact dermatitis and the field of occupational dermatology through its extensive Research and Development program. To this end CT works cooperatively with the world’s leading contact dermatitis associations (ICDRG - International Contact Dermatitis Research Group; EECORP - European Environmental and Contact Dermatitis Research Group; NACDG - North American Contact Dermatitis Group) to facilitate dermatological investigations where patch tests are involved.

Chemotechnique Diagnostics - the trusted name in patch testing!
RESOURCES – Chemotechnique Reference Manual

* Adobe Reader is required to view the above catalogue
AMERICAN CONTACT DERMATITIS SOCIETY

WITH THANKS TO
DORMER/CHMOTECHNIQUE
FOR PLATINUM LEVEL SUPPORT OF
EDUCATIONAL PROGRAMS AND EVENTS

MEMBERSHIP & SUPPORT SINCE 1997
ACDS MISSION: To promote, support, develop and stimulate information about contact dermatitis and occupational skin disease.

MEMBERSHIP BENEFITS
CAMP – Contact Allergen Management Program
DERMATITIS journal – Free subscription
CMEs – Earn at the annual meeting
Up-to-date information on the state-of-the-art
Network with national & international peers
RESOURCES – C.A.M.P.

C.A.M.P.
Contact Allergen Management Program

- For ACDS members and their patients
- Can help patients find appropriate products