

MADX
MACRO ARRAY DIAGNOSTICS

madx.com

ALEXX
ALLERGY XPLOER

ALEX³
300 ALLERGENS
COMPREHENSIVE. SPECIFIC. EFFICIENT.

*First path.
Right path.*

ALEX³
300 ALLERGENS

MADX
MACRO ARRAY DIAGNOSTICS

COMPREHENSIVE.

- High-relevance allergen sources
- 85 allergen families
- 107 exclusive allergens

COMPREHENSIVE.
300 ALLERGENS.
107 EXCLUSIVE.



ALLERGEN PANEL

The ALEX³ test includes both **allergen extracts** (like whole pollen) **and molecular allergens** (e.g., Der p 2). These two types don't interfere with each other – they complement each other to give a clearer and more comprehensive sensitisation profile.

Certified
& validated*



HIGH-RELEVANCE ALLERGEN SOURCES

e.g., animal dander, cereals, egg, legumes, milk, mites, moulds, pollen, seafood, tree nuts, and venoms

85 ALLERGEN FAMILIES COVERED, INCLUDING

α-hairpinin (e.g., Mac i 1.0101 | macadamia – risk assessment for severe reactions to tree nuts)

Collagen (e.g., Sal s 6 | salmon – hidden allergen in food and non-food products)

Cyclophilin (e.g., Bet v 7 | birch – resolving cross-reactivities to tailor therapeutic approaches)

Myosin light chain (e.g., Pen m 3 | shrimp – resolving cross-reactivities to insects, chicken and other sources)

nsLTP (e.g., Can s 3 | hemp – resolving cross-reactivities between hemp and related allergen sources)

PR-10 (e.g., Que a 1 | oak - for AIT indication to oak pollen)

Storage proteins (e.g., Pis s 1 | garden pea – risk assessment for severe reactions to legumes)

Thaumatococcus-like protein (e.g., Act d 2 | kiwi – risk assessment for fruit allergy)



EXCLUSIVE MOLECULAR ALLERGENS, INCLUDING

Bet v 7, Birch pollen, panallergen

Der p 20, Dermatophagoides pteronyssinus, panallergen

Pers a 1, Avocado, major allergen and cross-reactive to other fruits and latex

Tri a 36 & Tri a 37, Wheat, risk stratification

Len c 1 & Len c 3, Lentil, risk stratification

Pru du 6, Almond, risk stratification

Api g 7, Celery, risk stratification and cross-reactive to mugwort pollen

Can s 3, Hemp, cross-reactive to other nsLTPs

Gal d 7, Chicken, major allergen from chicken

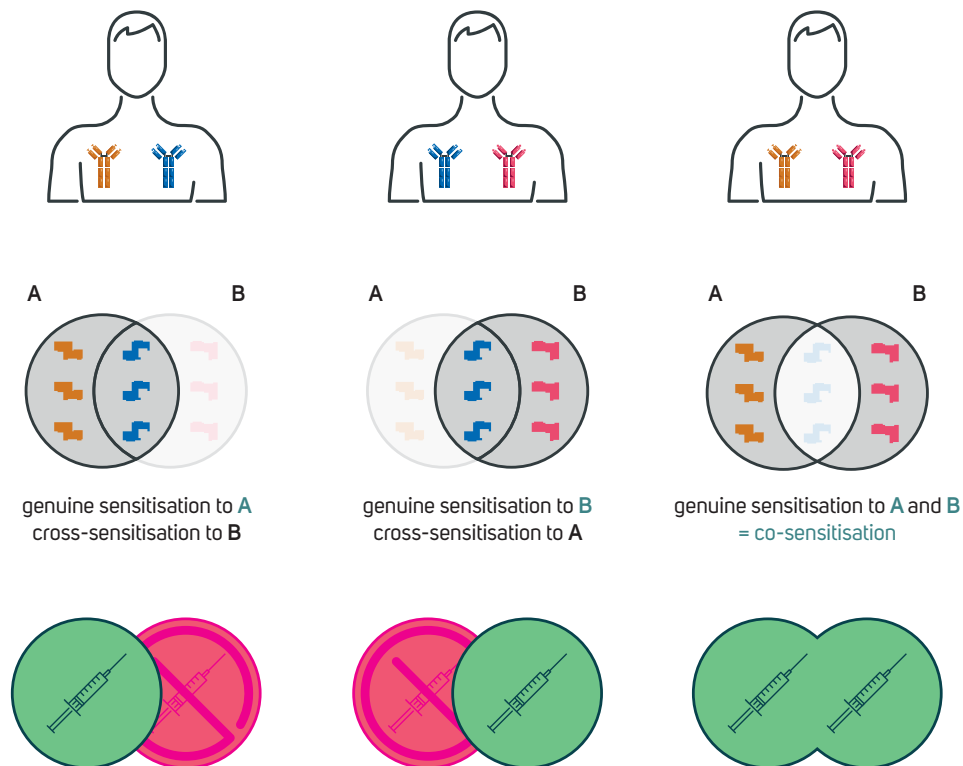
*You can find our quality certificates on our website: madx.com/extras

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IMPACT OF A COMPREHENSIVE MOLECULAR APPROACH

Differentiation between co- and cross-sensitisation



With this approach, accuracy of allergy diagnosis and therapy recommendations can be immediately improved. Genuine sensitisations can be identified which is of extreme importance for AIT prescription, since unnecessary AIT treatment may result in new IgE sensitisation.

BENEFITS FOR YOU

Complete sensitisation profile

Identification of co- & cross-sensitisations

Quick, evidence-based decision on risk management (e.g., food, latex)

Elimination of clinically irrelevant antibodies (false-positive results) due to CCD blockade

Less worries of complex pollination periods

Covers invasive species due to climate change

Covers global allergen sources, aiding diagnoses of diverse populations

BENEFITS FOR PATIENTS

Avoids unnecessary therapeutic interventions

Reduces unnecessary avoidance (food, environment, lifestyle)

Less anxiety & uncertainty

Clarifies confusing symptoms (cross-reactivities)

Considers new pollen species (climate change)

Considers dietary trends (e.g., plant-based protein sources)

Considers cultural & regional exposure

No need for multiple follow-up visits

ALEX³
300 ALLERGENS



SPECIFIC.

- High specificity & sensitivity
- Accuracy of diagnosis
- Accuracy of risk management

SPECIFIC.
218 MOLECULAR ALLERGENS.
QUANTITATIVE tIgE.



HIGH SPECIFICITY &
SENSITIVITY

ALEX³ provides **quantitative results** for specific IgE and total IgE, allowing calculation of the **sIgE/tIgE ratio**.
With **high specificity and sensitivity**, ALEX³ ensures **accurate detection of allergic sensitisations**.

Following scientific and regulatory standards, it offers **high reproducibility** for reliable detection and monitoring.

COMPARISON OF MOLECULAR AND
EXTRACT-BASED ALLERGY DIAGNOSTICS

Selection of AIT based on extract-based diagnostics

Clinical history
Strong rhinitis during early and late spring

Extract-based diagnostics	AIT indication
SPT: Birch extract (+) SPT: Grass extract (+)	Birch (+) Grass (+)

Molecular allergy diagnostics (MAD) (co- or cross-sensitisation)

Bet v 1 - allergen marker for birch pollen sensitisation
Phl p 1, 2, 5, 6 - allergen markers for grass pollen sensitisation

Added value of MAD for AIT selection

	Molecular allergy test	Diagnostics: co- and cross-sensitisation	AIT indication
Scenario 1	Bet v 1 (+) Phl p 1 (+)	co-sensitisation to birch and grass	Birch (+) Grass (+)
Scenario 2	Bet v 1 (+) Phl p 1, 2, 5, 6 (-) Phl p 12 (+)	cross-sensitisation	Birch (+) Grass (-)
Scenario 3	Bet v 1 (+) Bet v 4 (+) Phl p 1 (+) Phl p 7 (+)	genuine sensitisation (co-) to birch and grass with reactivity to panallergens	Birch (+) Grass (+)

Comparison of molecular and extract-based allergy diagnostics for prescription of allergen-specific immunotherapy (AIT).

BENEFITS FOR YOU

Accuracy of diagnosis

Accuracy of risk management

Accuracy of therapy recommendation

Enables efficient patient monitoring

Distinction between major and minor allergens

BENEFITS FOR PATIENTS

Avoids unnecessary therapeutic interventions

Reduces unnecessary avoidance (food, environment, lifestyle)

Avoids missing high-risk allergies

No need to stop antihistamines before testing

Enables sensitisation monitoring (e.g., AIT)

Small amount of serum needed (100-200 µl)

EVIDENCE-BASED



Screen to explore publications

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ACCURACY OF
RISK MANAGEMENT

Using molecular allergens instead of extracts offers a key advantage: it allows doctors to distinguish between allergic sensitisations that carry a high risk of severe reactions and those that are mostly harmless, even from the same source.

This is because molecular allergens provide more precise information, helping to identify exactly which parts of the allergen source are triggering the reaction. With this clarity, doctors can offer targeted treatment options.

	Unstable proteins		Stable proteins	
	Profilin	PR-10	nsLTP	Storage proteins
✕ Cross-reactivity	high	high	low to moderate	low to moderate
🍷 Stability concerning heat, digestion	unstable	unstable	stable	stable
⛶ Clinical relevance	low: inhalative symptoms, OAS	low: inhalative symptoms, OAS	high: OAS to anaphylaxis	high: frequent systemic reactions

Examples of protein families classified based on their cross-reactivity, stability, and clinical manifestations.



ALEX³
300 ALLERGENS



EFFICIENT.

- First path, right path
- Interpretation guide available
- Automated processing systems

EFFICIENT.
MINIMUM EFFORT.
MAXIMUM OUTPUT.



FIRST PATH, RIGHT PATH

Assumptions are based on the patient's memory and knowledge. But for the patient it's often hard to know exactly what was in a meal or product, what pollen might have been in the environment or in what circumstances a potential allergic reaction took place. **If the patients memory is lacking, your assumptions might lead you on the wrong path.**

Testing for all possible triggers quickly becomes time-consuming and expensive when using traditional allergy diagnostics. **Skin prick tests often require multiple sessions and tie up staff.** If results are negative, patients return for more appointments. Testing specific IgE can miss the mark too – **wrong assumption means more blood draws, more delays.**

One test.
Clear answer.

INTEGRATED INTERPRETATION GUIDE

With MADx products, you save time not only by reducing follow-up tests but also through our smart interpretation guide. Designed to complement the ALEX³ test, it helps you quickly make sense of comprehensive IgE profiles by **combining clinical history with test results**. Covering all 300 allergens included in ALEX³, it **translates data into meaning** – quickly and reliably.

Built on a transparent **rules-based system** (not AI or LLM), it saves valuable time by pulling together a **database of more than 1 million test results worldwide** and key information from literature. It supports confident, efficient decision-making for a therapy recommendation.

This powerful tool comes bundled with ALEX³ and is known as **RAVEN²**.

Certified &
validated for
clinical use*



Optional on-demand support

*You can find our quality certificates on our website: madx.com/extras

BENEFITS FOR YOU

- Combines clinical history with test results
- Gives clear insights into risk & severity
- Helps understanding cross-reactivities
- Helps explaining the results to the patient
- Integrates allergen-specific comments
- Eliminates extensive allergen database searches
- Supports with therapy recommendations

BENEFITS FOR PATIENTS

- Less waiting time to understand allergic triggers
- No need for follow-up testing
- No need for multiple follow-up visits
- Earlier & more effective treatment
- Greater confidence in the diagnosis

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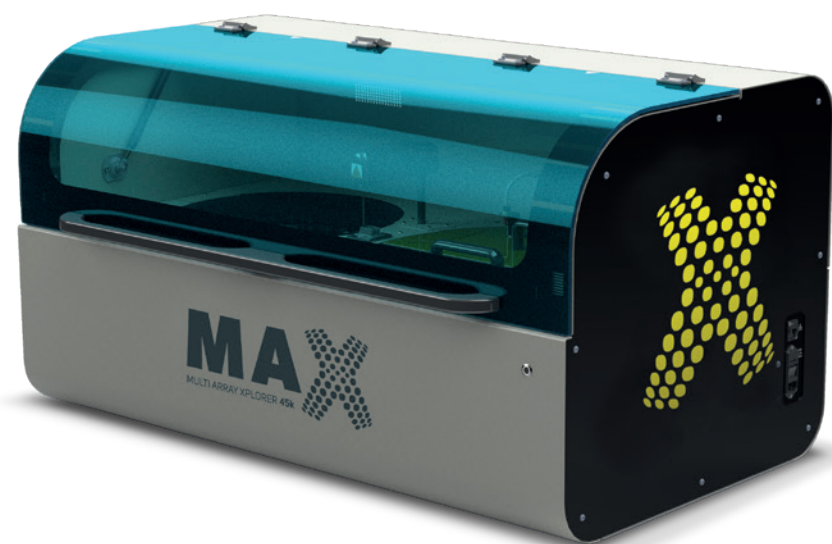


AUTOMATION

Our **automated processing systems** are designed to improve efficiency across a wide range of laboratory settings. Whether for smaller labs or doctor's offices with moderate throughput or large-scale facilities with high processing demands, our MAX systems offer a suitable solution for processing the large allergen panel of ALEX³.

Requiring only **minimal training** of just a few hours and **a few minutes of hands-on time** per run, the systems can be quickly integrated into daily routines. Automation ensures that personnel are not tied up by routine procedures, allowing them to focus on patients or other tasks.

By minimising manual steps and the potential for **human error**, the MAX systems support efficient performance and optimal use of both time and human resources.



EXPLORE



our proprietary
processing
systems.





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MKT-2 V.2.0