

# Array 10 Interpretation Guide

Cyrex Array 10 is the newest reactivity test. It tests reactivity for 180 antigens, basically everything Array 3 and 4 do not test for. Unlike most tests, it tests for cooked foods in addition to raw. Additionally, it tests for combined proteins. Combined proteins occur when food proteins combine in a day-to-day diet.

## WHO SHOULD GET TESTED?

- Anyone still experiencing symptoms after going on a gluten-free diet
- Anyone with ongoing symptoms that have not resolved after addressing gut pathologies (and other pathologies)

## TEST PREPARATION:

- Exposure to particular foods is what triggers antibody production, so the patient must have consumed foods on Array 10 within 25 to 30 days of test for accurate results.
- Since the purpose of Array 10 is to identify foods still causing symptoms in their day-to-day diet, it's best to have them continue their normal diet leading up to testing.

## RESULTS

- Equivocal: represents the range between normal and low-positive results
- Advise patients to remove both equivocal and positive foods
- Equivocal foods can be reintroduced one at a time, after at least 30 (preferably 60) days, with three to five days between reintroduced foods

## SPECIFIC TESTS

### Cross-reactive, pan-antigen isolates

- Some food antigens cross-react with human tissue and cause autoimmunity, inflammation, etc.
- Cross-reactive antigens include gliadin, casein, food aquaporin, shrimp tropomyosin, and fish parvalbumin
- Pan-antigens are proteins found in multiple foods
- They include shrimp tropomyosin, fish parvalbumin, and hevein, found in latex and some fruits, nuts, and vegetables

### Large gum molecules

- Gums are present in many processed foods, especially gluten- and dairy-free products, and can cross-react with other food proteins
- Found in soups, juices, jams, salad dressings, soy products, dairy products such as milk and yogurt, and dairy alternatives (nut/soy milk)

### **Binding isolates**

- Lectin and agglutinin are binding isolates found in about 30 percent of foods

### **Tissue-bound food coloring**

- Artificial food colors used extensively in processed foods that may create sensitivity for otherwise tolerated foods

### **Amplified antigenic proteins**

- Specific proteins and peptides that are smaller compounds within larger food proteins
- These include: shrimp tropomyosin, shrimp protein, cashew vicilin, cashew proteins, pineapple bromelain, pineapple proteins, rice endochitinase, and rice proteins
- A patient may test negative to the whole protein antigen but positive to the specific peptides

### **Oleosins**

- Oil proteins found in seeds and nuts
- Some patients may not react to proteins in nuts and seeds but may react to oleosins

### **Meat glue**

- Meat glue (aka transglutaminase or thrombain) is a powder used in food processing to “glue” smaller pieces of meat together into one larger piece
- Patients may react to the meat glue, while not reacting to the meat itself

### **Dual antibody detection**

- IgA is an indication of mucosal immune response, and IgG is indication of circulatory immune response

## SPECIFIC ANTIGENS AND ACTIONS

Positive Antigen	Action
Lectins/agglutinins - bean, peanut, soybean, lentil, pea	Abstain from all lectins/agglutinins in legumes/ beans Consider Cyrex Array 5
Aquaporins - corn, spinach, soy, tomato	Abstain from all aquaporins Consider Cyrex Arrays 7/7x & 20
Beta-glucan	Abstain from beta-glucan Check for pathogenic bacterial and fungal infection Consider Cyrex Array 8
Cashew vicilin	Abstain from cashews
Cucumber (pickled)	Check ingredients on jar; patient may be reacting to them rather than cucumber
Artificial food coloring	Abstain from foods containing food colorings Consider Cyrex Arrays 5 & 20
Imitation crab	Check ingredients; patient may be reacting to any of the included substances
Latex hevein	Avoid latex Don't consume cross-reactive foods: banana, avocado, chestnut, kiwi, eggplant, custard, apple
Meat glue	Patient may be reacting to meat glue, cooked beef, or one of the individual ingredients in meat glue
Parvalbumin	Abstain from all forms of fish Consider Cyrex Array 5
Shrimp tropomyosin	Abstain from all forms of shellfish Consider Cyrex Array 5
Pineapple bromelain	Abstain from pineapple, including digestive enzymes containing bromelain
Potato, white, cooked (fried)	Patient may be reacting to potato or oil Cross-reference canola oil for reaction
Sardine + anchovy	Patient may be reacting to fish or the oil Cross- reference olive oil for reaction