

## CLINICAL SPECIFICATIONS

### FOOD COLORING

#### Antigen Made From:

Commercially available artificial Food Coloring (red, yellow, blue, and green) mixed together and bound to human tissue antigens

#### Associated With:

Food Coloring immune reactivity

#### Known Cross-Reactions:

#### Clinical Significance:

Artificial food coloring is a dye added to food or drinks, which can enhance immune reactivity to the food product. In a rat study, consumption of both low and high color foods resulted in significant decrease in liver GSH; while high concentration of color foods contributed to systemic inflammation leading to increase number of WBC; and food coloring changed histological structure of liver and kidney.<sup>1</sup> Studies on food immune reactivities predominantly use raw food antigens. However, some researchers have noted that heating or combining food proteins can change their antigenicity.<sup>2-4</sup>

This array tests for IgG and IgA food immune reactivity.<sup>5,6</sup> Equivocal or out-of-range results indicate antibody reactivity to the tested food antigen. We tested 288 blood donor sera against food coloring antigens at optimal dilution, 10.4% of these donors were IgG and IgA reactive.

Due to cross-reactivity, possible connections between food antigens and human autoimmunity has been previously suggested because proteins in nature can have a similarity in sequence and structure to certain human tissues.<sup>7-10</sup>

Data suggests that eliminating foods identified using IgG antibody food testing can play a role in improvement of symptoms.<sup>11</sup> Because certain food components can lead to gut flora changes and gut permeability, eliminating specified food antigens should result in the reduction of antigenic stimuli and the improvement of symptoms.<sup>11,12</sup>

The results of this food array may be used to develop and implement an immune targeted dietary plan, which includes the avoidance of triggering and known cross-reactive foods. Furthermore, when followed over time, avoidance/prevention treatment plans tailored and supervised by the ordering healthcare professional, may help: (a) repair the gut barrier; and (b) re-establish oral tolerance to the offending food.<sup>11,12</sup>

#### References:

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