



## Urinary Pyrroles

A common feature of many emotional and behavioral disorders is pyroluria, a condition which causes the body to over-produce a group of compounds known as *Pyrroles*. The measurement of urinary Pyrroles may be indicated for individuals with behavioral and emotional disorders such as ADHD, anxiety, depression, schizophrenia, or bipolar disorder.

Pyroluria can be genetic, or induced by oxidative stress and the presence of Pyrroles in the urine usually correlates with nutrient deficiency. Pyrroles bind irreversibly to Vitamin B6 (pyridoxine) and zinc, rendering them inactive and depleting them from the body through urinary excretion. A deficiency of Arachidonic acid (and omega-6 fatty acid) is also common in pyroluria.

These nutrients are then unavailable for their important roles as co-factors in enzymes and metabolism, which further aggravates the patients' symptoms and increases their requirements for these nutrients.

Pyroluria is a stress-related condition and when symptoms such as anxiety, mood swings, behavioural problems, etc. are brought on by stressors, testing for urinary Pyrroles should be considered. It has also been proposed that pyroluria may be due to a stress-induced variance in intestinal permeability, which allows Pyrroles to re-enter systemic circulation.

### **Specimen Requirements**

A urine specimen from the second morning void is to be collected. Collection must be performed only at an Australian Clinical Labs collection centre and requires specific equipment to maintain the integrity of the sample for testing. Please call 1300 55 44 80 to find the closest Australian Clinical Labs collection centre.

### **Patient Preparation**

- If the patient is taking B6 or Zinc supplements, it is advised they cease this 3 days prior to taking the test. If this is not appropriate or possible, it should be noted on the request form as B6 and Zinc can mask the presence of urinary Pyrroles.
- Do not collect urine during menstruation

### **Turnaround Time**

The standard turnaround time for this test is 10 – 14 working days from the date the patient's specimen/s are received at our laboratory.

### **Companion Tests**

- Folate
- Vitamin B6
- Vitamin B12
- MTHFR Gene Test
- Red Cell Zinc
- Homocysteine