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SECTION 24

XANTHOCHROMIA

Xanthochromia Quality Controls

Xanthochromia is derived from the Greek word “xanthos,” meaning yellow. The term was first used to describe the pink or yellow pigmentation of cerebrospinal fluid (CSF). This colour change is attributed to varying concentrations of pigmented compounds such as oxyhaemoglobin, bilirubin, and methaemoglobin, which are typically the by-products of red blood cell degradation.

The term is now more widely accepted to represent the yellow colour created by the presence of bilirubin in the CSF. The presence of bilirubin, resulting in yellow discoloration of the CSF, is the contemporary definition of xanthochromia. It can be diagnosed by 2 methods: the traditional visualization or eye test, and the more sensitive and specific spectrophotometry. Detection of Xanthochromia has been facilitated since the 1950s by the spectrophotometric analysis of CSF but is usually possible by simple visual inspection of a sample held in front of a white piece of paper. Heme pigments can be found in CSF within 12 hours of subarachnoid bleeding, reach peak levels after 36–48 hours, and typically disappear over the next 7–10 days.

Bilirubin accumulation in CSF may occur via intrathecal conversion from haemoglobin-heme within macrophages and other leptomeningeal cells, or by passive diffusion from the circulation during periods of severe jaundice. In this latter setting, CSF is not usually stained until the total plasma bilirubin reaches 10–15 mg/dl. The presence of bilirubin in CSF is the main cause of xanthochromia associated with high spinal fluid protein content, usually found above levels of 150 mg/dl.

Fortress Diagnostics has been manufacturing Xanthochromia Controls for a number of years intended for use as a true third party control in monitoring the performance of Bilirubin and Oxyhaemoglobin in Cerebrospinal Fluid. Xanthochromia Controls are supplied as unassayed and are suitable for use as IQC with various UV spectrophotometers. It is designed to deliver a cost-effective control to users.



Lyophilised



Liquid
Frozen



Liquid
Stable



100% Human
Serum



Assayed Target
Values Provided

Xanthochromia Quality Control



- Lyophilised format for convenience and longer shelf life.
- Human Based Material.
- True Third Party control providing unbiased assessment of performance.
- Open reconstituted Vial stability of 2 days at 2° to 8°C. Stable for 1 year when stored unopened at 2° to 8°C.

Analytes

Bilirubin

Oxyhaemoglobin

Description	Size	Cat No.	Type
Xanthochromia Positive Control	3 x 1 ml	BXC0355A	Lyo.