

Hair testing in children: Scientific precision in safeguarding

Marie Law, Director of Toxicology at AlphaBiolabs, discusses the role of hair drug and alcohol testing in children, and the forensic standards underpinning its use in family law



In care proceedings and private family law cases, toxicology evidence can play a pivotal role in safeguarding decisions. When concerns arise around a child's potential exposure to drugs or alcohol, hair testing offers a valuable means for legal professionals to assess longer-term risks within a child's environment.

A non-invasive method with a detection window up to 12 months (hair length dependent), hair testing is beneficial where there are allegations of ongoing parental substance misuse or when identifying patterns of exposure over time.

Why use hair testing in children?

Hair testing enables practitioners to assess whether a child has been exposed to drugs/alcohol over an extended period. It is particularly relevant in:

- **Care proceedings** – to support concerns of repeated exposure at home.
- **Private family law cases** – to inform decisions on contact/residence where parental substance use is in question.
- **Safeguarding investigations** – to build a clearer picture of the child's living environment.

However, interpreting children's results requires specialist scientific care due to several key physiological and environmental differences compared to adults.

Considerations

Children's hair is more porous, meaning it can absorb substances more readily, increasing the risk of environmental contamination (e.g. from smoke, hands, or surfaces where drugs are present). A child's hair may also grow at different speeds

depending on age, health and nutrition.

At AlphaBiolabs, our toxicologists are trained to account for these variables – alongside contextual evidence from social workers, healthcare professionals, and the child's home environment – ensuring scientifically robust and defensible interpretations.

Sample collection

As with adult testing, children's samples must be collected under strict chain-of-custody conditions to preserve evidential integrity.

A minimum of 20mg of hair (around 3cm) is preferred, allowing for three months (approx.) of analysis. If scalp hair is unavailable, alternatives such as body hair or nail clippings may be used, though these have limitations.

Ingestion versus passive exposure

A key challenge in interpreting results is distinguishing between actual ingestion and passive exposure – a distinction that can significantly impact a case.

All children's hair samples therefore undergo triple decontamination washes, with both hair and wash solutions analysed to determine levels of environmental contamination (passive exposure) against ingestion.

Standard adult cut-off thresholds are not appropriate for children, who may be affected by far lower levels of exposure. At AlphaBiolabs:

- Results are therefore reported from the **limit of quantification (LOQ)**, not just above adult thresholds.
- Even low-level findings are carefully interpreted within the safeguarding context.

To determine the likely route of exposure, we use:

- **Metabolite detection** – which helps confirm ingestion.
- **Wash-to-hair ratio analysis** – if drug levels are higher in hair than in washes, this supports the possibility of ingestion.
- **Segmented analysis** – identifying whether exposure was isolated or sustained.

Every child report includes a clear explanation of these findings, supporting legal professionals in understanding the results in context.

Alcohol testing

While rare, alcohol testing in children may be necessary where there is a specific legal/safeguarding reason.

In this instance, AlphaBiolabs tests for ethyl glucuronide (EtG), a direct biomarker of alcohol consumption.

However, interpretation is complex due to the absence of child-specific cut-off levels and the increased risk of environmental exposure (e.g. hand sanitisers, wipes). Each report includes appropriate caveats and situates the findings within the wider context of the case.

Testing with integrity

AlphaBiolabs is trusted by family courts, solicitors, social workers, and local authorities to deliver reliable, scientifically rigorous testing services that support critical safeguarding decisions.

We are UKAS 17025-accredited, with Lab 51 extension for toxicology, and all child toxicology reports are peer-reviewed by senior scientists to ensure legal defensibility.

To request a quote, contact our New Enquiry team on 0333 600 1300 / testing@alphabiolabs.com or complete our online quote form www.alphabiolabs.co.uk/legal-test-forms/.

Marie Law, Director of Toxicology at AlphaBiolabs

A highly-skilled and respected scientist with over 15 years' experience in the field of forensics, Marie joined AlphaBiolabs in 2022 and oversees the company's growing toxicology team.

As Director of Toxicology, Marie's day-to-day responsibilities include maintaining the highest quality testing standards for toxicology and further enhancing AlphaBiolabs' drug and alcohol testing services for the legal sector, members of the public, and the workplace sector.



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