MECLOFENOXATE

1.0 Introduction

WADA wishes to draw the attention of the Laboratories to the following observations and instructions on the analysis and reporting of Meclofenoxate Metabolite 4-Chlorophenoxyacetic acid (4-CPA).

Meclofenoxate is rapidly degraded to 4-CPA in biological fluids (e.g. human plasma or urine) \(^1,2\). However, 4-CPA is also used as a herbicide and a plant growth regulator in some countries or regions of the world. Therefore, the presence of 4-CPA in urine may originate not only from meclofenoxate administration but also from an oral ingestion of residues of 4-CPA in food \(^3\).

[Comment: The substances from the chlorinated phenoxy acid herbicides (CPAHs) class, which includes 4-CPA, present similar pharmacokinetics, and after ingested, they are rapidly eliminated unchanged in the urine \(^3\). In workers that regularly spray these herbicides in the plantation fields, the ranging concentration found of CPAHs in urine was 15-800 ng/mL, while for the general population, the presence of CPAHs never exceeds the urinary concentration of 2.5 ng/mL \(^4\).]

2.0 Analysis and Reporting Requirements

Before reporting a result as an Adverse Analytical Finding (AAF) for meclofenoxate, Laboratories shall evaluate whether the finding is the result of the consumption of 4-CPA contaminated food.

- Laboratories shall investigate the presence of meclofenoxate when 4-CPA is found in a urine Sample;
- Laboratories shall report an AAF for meclofenoxate if:
  - Meclofenoxate is found in a urine Sample at any concentration, in conjunction with 4-CPA being present at an estimated concentration above (>2) the Minimum Reporting Level (MRL) for stimulants; or
  - In the absence of meclofenoxate, when the estimated 4-CPA urinary concentration is higher than (>2) 1 μg/mL.

[Comment: Due to the instability of meclofenoxate in urine, its identification in the “B” sample is not necessary. Therefore, the “B” Confirmation Procedure may only confirm the presence of 4-CPA (in compliance with the TD IDCR \(^5\)) for the AAF to be valid.]

3.0 References


[Current versions of WADA Technical Documents may be found at https://www.wada-ama.org/en/what-we-do/science-medical/laboratories]