

**SAM-PRA-044**

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## **SAMPLE PREPARATION**

### **The special case of Antibiotics**

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#### **• Context**

Chloramphenicol is a broad spectrum antibiotic frequently employed in animal and fish production in certain parts of the world because of its excellent antibacterial properties. Due to the suspicion that chloramphenicol is carcinogenic and that it causes medullar aplasia in human it was totally banned in the EU in 1994 and since then a zero tolerance level for food exists.

#### **• General objective(s)**

Chloramphenicol can be extracted efficiently and rapidly from biological samples by using MIP (Molecularly Imprinted Polymers). MIPs are polymers with tailor-made selectivity for a target analyte or a group of analytes.

#### **• Main items**

SPE / MIPS / Chloramphenicol / Honey

#### **• Pedagogical objectives**

- ✓ To perform chloramphenicol extraction/ purification from honey samples
- ✓ To be able to distinguish between the different steps of the protocol
- ✓ To identify the critical points of the extraction process

#### **• Pedagogical tools**

- ✓ Demonstration on biological samples
- ✓ MIP cartridges utilisation
- ✓ Demonstration performed in the lab

#### **• Duration**

- ✓ 1 hour

#### **• Pre-requisite**

- ✓ Theoretical lectures on sample preparation (SAM-THE-010, SAM-THE-020, SAM-THE-030)