

# **DEVELOPMENT OF A RAPID TEST FOR MALACHITE GREEN (MG) IN FISH: A COMPARATIVE STUDY BETWEEN ANTIBODY, APTAMER AND RECEPTOR MG-BINDERS**

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Malachite Green (MG) is a synthetic dye that is sometimes illegally used in aquaculture as antifungal, antimicrobial and antiparasitic agent. Due to its (mutagenic and carcinogenic) toxic effects on human health, this dye has been banned in animal product for human consumption in Europe. The European Commission has established a Minimum Required Performance Limit (MRPL) for the analysis of MG and its metabolite Leucomalachite Green (LMG) at 2 ppb.

In order to develop a rapid dipstick-based assay for the detection of MG/LMG in fish, we have characterized and compared 3 different types of anti-MG/LMG binding molecules including a polyclonal antibody, a RNA aptamer and a biological receptor.

The best reagent has therefore been chosen and implemented to a lateral flow device format developed to detect MG/LMG at ppb level in fish tissue and feeds.

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