



# MALACHITE GREEN ELISA (5161MG)

## General

Malachite Green (MG) is a synthetic dye. MG is highly soluble in water and has long been used in the aquaculture industry as an effective fungicide and disinfectant. MG is potentially carcinogenic and may cause significant health risk for humans who consume contaminated fish. Its use is banned in the European Union.

The antibody used in this kit cross reacts with Leuco Malachite Green and Cristal Violet.

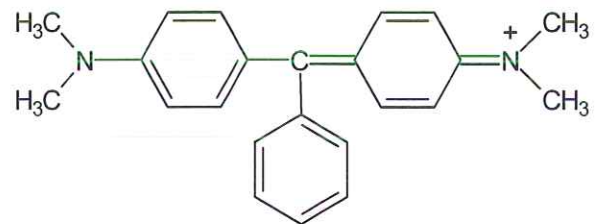
On uptake, MG is rapidly reduced into Leuco Malachite Green (LMG) and deposited in edible fat tissues. In trout and catfish e.g., 80% or more of the absorbed MG is converted to LMG, having a half-life in trout muscle as long as 40 days. Malachite Green is not listed as a veterinary medicine and its administration for that purpose is therefore not permitted in aquaculture. On 22/12/2003, the Commission set a Minimum Required Performance Limit (MRPL) for the analysis of residues of MG and LMG of 2ppb (Commission decision 2004/25/EC).

*This highly sensitive test detects MG at a level of 0.2 ppb in surrounding water and edible tissues of aqua culture products.*

## Kit characteristics

- **Microtiter plate:**  
12 x 8 break wells
- **Antibody cross-reactivity:**

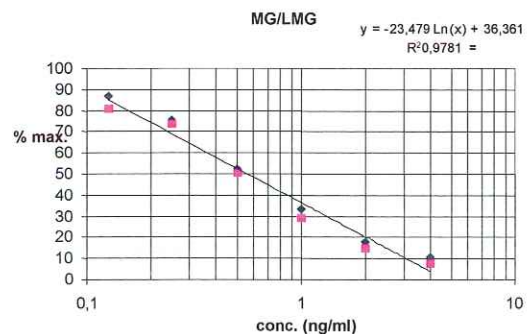
Malachite green	100%
Leuco Malachite green	70%
Cristal Violet	80%
- **Conjugate:**  
Malachite green-HRP stabilized
- **Standard range:**  
Stock standard: 10 µg/ml
- **Sample preparation:**  
Shrimps, fish, eel and water: dichloromethane extraction.  
Shrimps, fish: perchloric acid/acetonitril extraction.



Chemical structure of malachite green

## Assay procedure

Antibody, conjugate and sample/standard are pipetted into the wells and incubated for 30 min at 2°C - 8°C. After a washing procedure ready to use substrate is added and incubated for 15 minutes at RT (20°C - 25°C). Stop the reaction and read in a spectrophotometer at 450 nm.



## Assay characteristics

Matrices and sample preparation,	LOD (ppb)
Dichloromethane extraction	
Shrimps, fish, eel            MG	0.2

LOD (Limit of Detection); Validation according SANCO/1085/2000.