# Kit for the colorimetric analysis of chlorine in pools and waters

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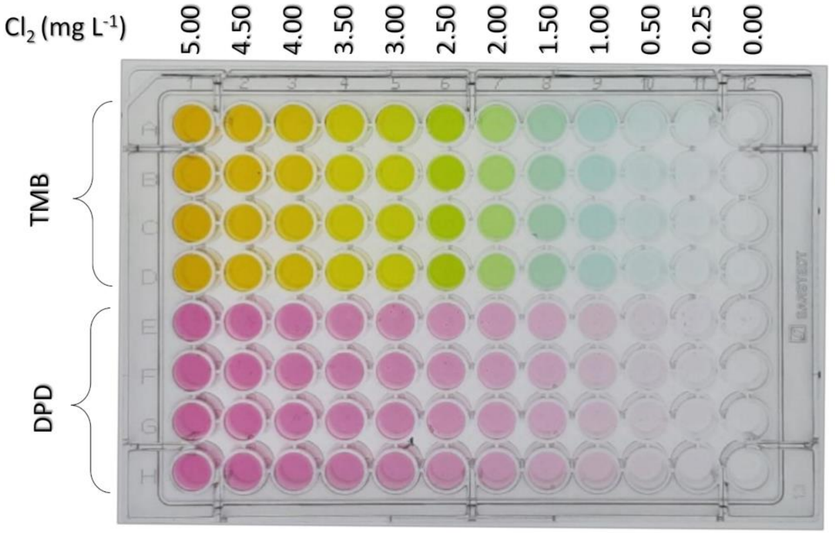
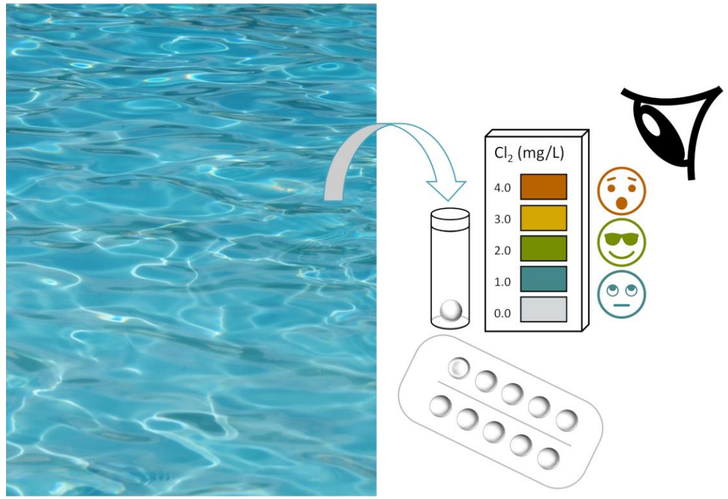
# Invention

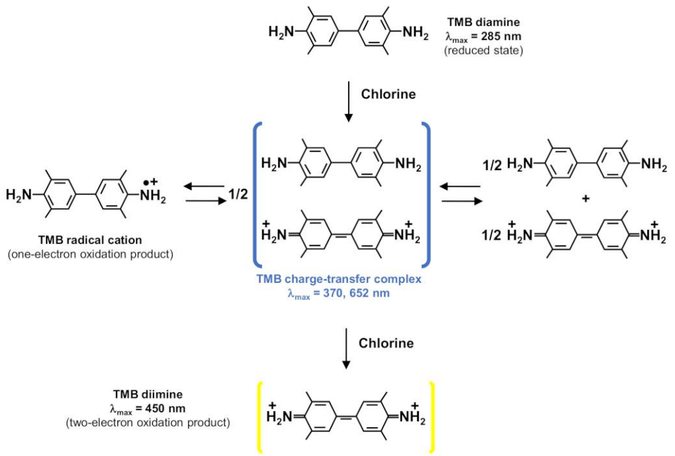
The purpose of the present invention is the supply of a kit for the visual determination of the chlorine concentration, which is necessary for an effective disinfection of drinking water or water used for recreational purposes (swimming pools, water parks), by using the synthetic molecule 3,3',5,5'-tetramethylbenzidine (TMB) as colorimetric probe.

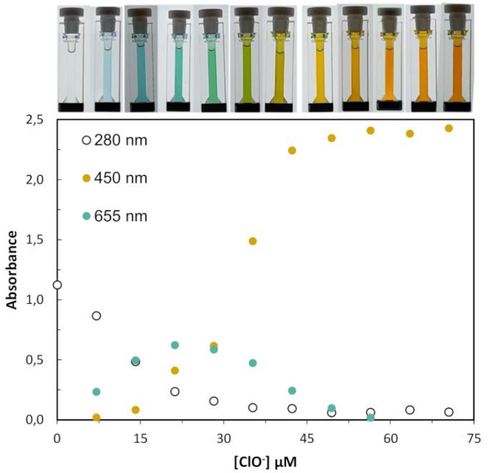
The present invention relates to a kit for the colorimetric determination of chlorine concentration in water for the inactivation of numerous microorganisms and pollutants and to guarantee their protection from recontamination.
The colorimetric kits available on the market are based on molecules that generate monochromatic solutions, pink or yellow, that allow a very approximate estimate of the chlorine content.
Differently, the 3,3',5,5'-tetramethylbenzidine (TMB) molecule is a reliable multi-colorimetric indicator of chlorine that overcomes the limits of the products on the market by generating different colors for different concentrations of chlorine. Being able to be used at very low concentration, the kit is suitable for greatly reducing the risks of intoxication and environmental pollution.
The duration of the test is just thirty seconds, and the kit is pocket-sized and can be combined with other kits on the market like pH-test.
The test is especially designed for drinking and recreational water. However, the patent also covers tests for high concentrations of chlorine.

# Drawings & pictures



# Industrial applications

The technology allows the production of kits for measuring the chlorine level in swimming pools and waters with a simplified interpretation method of the results, thanks to greater sensitivity and accuracy of chlorine measurement and a multi-colorimetric test (blue, green, yellow). The substances used leads lower health and environmental risks compared to commercial kits.

The possible industrial applications start from professional chemical analyzes, to control and investigation systems in the field of hygiene, safety and public health, without forgetting environmental controls, the safety of recreational activities and teaching functions.

## Possible developments

The patent is available under an exclusive/non-exclusive license.

The license is available for the entire remaining term of the patent titles.

The research group is available for new research activities in collaboration and on behalf of third parties, technical insights, scientific advice, also aimed at raising the TRL of technology.

The TRL of the invention is 7.

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