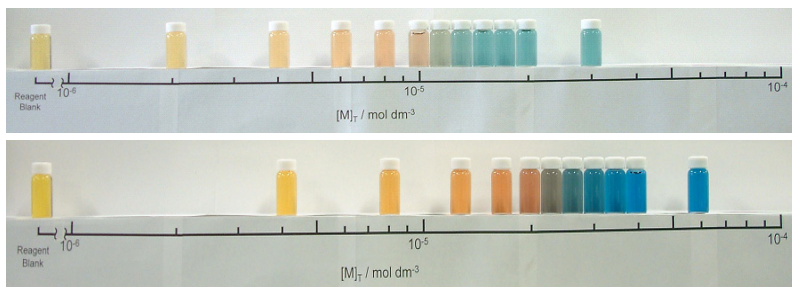


# Development of High-Performance Visual Analytical Techniques

Assistant Professor Hitoshi Mizuguchi



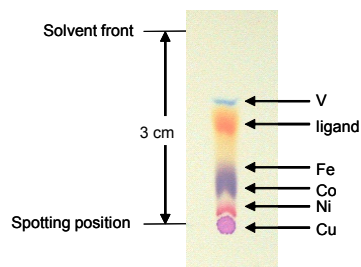
## Visual Threshold Detection of Trace Metal Ions



Vivid color changes before and after the grey point engendered the successful performance of the visual threshold detection of trace metal ions at a criterion.

## Visual Simultaneous Detection of Trace Metal Ions

You can see at one view the kind and amount of metal ions which are contained in water samples, by using difference and intensity of colors.



## Content

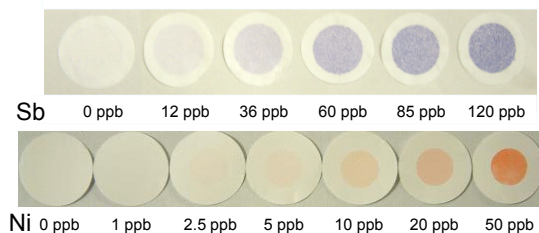
One of the most important aim of Analytical Sciences is to expand the view of scientific information for human beings. That is, “Seeing what was unseen”. To expand the space of scientific information that the human can see is also creation of wisdom, and is indispensable to growth of science and technology.

### To make chemical analyses more simple and familiar...

The development of simple analytical methods with high sensitivity and selectivity is an urgent necessity in environmental and biological fields. Visual measurements which are using human eyes as “Optical Detector” offer various advantages compared with expensive instrumental ones, and is one of forefront fields in analytical sciences.

## Selective Visual Detection Using Membrane Filters

The concentration of the analyte was determined by visual comparison of the filter color. These techniques have excellent selectivity and sensitivity.



Yamagata University Graduate School of Science and Engineering  
Research Interest : Analytical Chemistry

E-mail : [mizu@yz.yamagata-u.ac.jp](mailto:mizu@yz.yamagata-u.ac.jp)

Tel : +81-238-26-3140

Fax : +81-238-26-3413

HP : <http://mizu-labo.yz.yamagata-u.ac.jp/>

