
**Fine bubble technology — Elimination
method for sample characterization —**

**Part 1:
Evaluation procedure**

*Technologie des fines bulles — Méthode d'élimination pour la
caractérisation de l'échantillon —*

Partie 1: Mode opératoire d'évaluation

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This document was prepared by Technical Committee ISO/TC 281 *Fine bubble technology*.

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Introduction

Fine bubble technology has recently seen growth in its application to markets in cleaning, water treatment, agriculture, and aquaculture as well as biomedical fields. Now, methods are required to evaluate the generation systems. Especially characteristics like the number concentration index and the size index of fine bubbles are indispensable for those evaluations.

Furthermore, fine bubble dispersion water may contain other solid and liquid particles. Clearly due to this is a concern, as it may be impossible to evaluate the characteristics of fine bubbles. Therefore, it is an urgent task to address this concern.

There are several measurement methods widely used to evaluate the number concentration index and the size index of particles. However, there are few methods to distinguish bubbles in fine bubble dispersions from other particles.

This issue can be resolved, using the phenomenon by which the bubbles can be eliminated without any residues after dissolution and flotation. If a method that eliminates fine bubbles in specific size range is known, it is possible to distinguish fine bubbles from other solid and liquid particles. The eliminated particles can be fine bubbles. If most of fine bubbles decreased, a solution that doesn't have them can be used as a blank solution for measurements as background. Because it is expected that fine bubbles elimination techniques will develop further, standardizing elimination techniques and evaluation method is required.

This document is intended to specify the evaluation method for elimination efficiency of fine bubbles from fine bubble dispersions in water.

Standardization for evaluating elimination efficiency of fine bubbles enables easy and clear comparison among the several elimination techniques and realizes the optimization of conditions for respective elimination techniques.

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