SUMMARY COMMENTS AND STATUS OF HORIZONTAL DS 15. PH

RECOMMENDATIONS FROM THE STEERING COMMITTEE

For the parameter pH the SC recommends to proceed with comparison of methods to be able to make a decision based on a proper data set for the three matrices. The major point of discussion will be the pretreatment (drying) of samples before testing.

SUMMARY OF COMMENTS

HORIZONTAL DESK STUDY 15. FEASIBILITY OF A DRAFT HORIZONTAL STANDARD FOR PH

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We believe that a choice has to be made and have aimed at defining a general method which has a high validity. It is stated that *"for agricultural purposes this parameter has always been based on dried soils; this will not change, so the relevance of a wet sample method in agriculture can be ignored"*. This statement is somewhat problematic. For instance, the chemical speciation and bioavailability of several trace elements are critically dependent on the pH value. Therefore, the pH measured should be a reasonably good approximation of the pH in the soil solution under field conditions. We think that water extraction of fresh soil samples meets this requirement.

When we attempted to make a horizontal standard for determining pH in soil and sludge we ran into the problem of sample pretreatment. Traditionally pH is determined in soil samples which have been air-dried. Sludge samples are usually wet and it is not practical or suitable to dry them before the pH measurements.

We have tried to show that it is generally preferable to use fresh samples also for soils but we do realize that there are some difficulties connected with the homogenization and sieving of some fresh soils, particularly those soils which have a high clay content.

Our recommendation is therefore to develop a standard like ISO 11464 for pre-treatment of fresh soil samples without drying them. In order to obtain that goal, more comparative studies of dried and fresh samples of soil and sludge should be carried out. This will obviously require some research efforts. The proposed studies should also include

comparisons between water and 0.01 M $CaCl_2$ as extractants for soil, paste-like and solid sludges and for biowaste.

Even if such a research effort is not feasible we find that a horizontal standard could be developed. In this standard the preparation steps for soils will be different from those of sludge and biowaste.