SUMMARY COMMENTS AND STATUS OF

HORIZONTAL DS 19. ICP

RECOMMENDATIONS FROM THE STEERING COMMITTEE

The Steering Committee suggested discussing the interference problems of ICP with certain types of soils rich, for instance, in tin or iron. It was agreed to add flame AAS and the determination of mercury by atomic fluorescence to this Work Package, if necessary by increasing the budget of €4,000 to cover the extra costs. **The revised desk study with these integrations should be submitted by March 2004**.
Concerning Phase II, it was decided to merge experimental works on digestion and measurement with ICP and AAS as both aspects are linked. A detailed programme on what will be performed for these investigations should be previously sent to the Steering Committee.

SUMMARY OF COMMENTS

HORIZONTAL DESK STUDY 19. DETERMINATION OF ELEMENTS BY ICP-AES AND ICP-MS

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Eight working groups and individuals have given a total of 59 comments on desk study Horizontal 19 ICP-AES and ICP-MS. Seven respondents endorsed the recommendations for the next phase, one did not (AFNOR).

The most important and frequently mentioned comments were:
Handling high matrix load and high concentration of interferents in soil and waste should be more emphasised and made more explicit. Author's response: agreed.
ISO TC190/SC3/WG1 Working Document on ICP-AES was not considered. Author's response: WD must be the prominent basis of the revised horizontal standard.
Mercury should be included in both horizontal standards. Author's response: agreed.
Quality control criteria in the standards considered sometimes too heavy or too weak. Author's response: matrix dependent criteria must be investigated to deal with this problem.

Methods for ICP-AES and ICP-MS in different field are basically the same. The main difference originate from the matrix. As mentioned matrix influences and matrix handling in both standards will be improved.

Apart from the one negative opinion there is no indication among the respondents that the assessment of the property assessed is different from the property needed. Only mercury is mentioned as missing but will be added.
It can be concluded that a horizontal standard is feasible for ICP-AES as well as ICP-MS for sludge, soil and biowaste.

The remaining point to be resolved, apart from redrafting, is the attainability of the quality control requirements for the different matrices and the determination of trueness and precision for heavy matrices. This will involve intra-laboratory validation (quality control requirements) and round robin testing for the different matrices (trueness and precision).
The verification of the quality control requirements is necessary to finalise the international standards; round robin testing is necessary if the CEN standards have to include experimental performance data.

Remark:
The draft horizontal standards are not only applicable for soil, sludge and biowaste but also for different types of water. There is no reason to exclude these as development of ICP standards started in water analysis.