

CONTENTS

1	INTRODUCTION	5
2	SCOPE AND APPLICATION	5
3	QUALITY ASSURANCE AND CONTROL TOOLS	6
3.1	REFERENCE MATERIALS	6
3.1.1	Reference material for water analysis (deposition and soil solution)	6
3.1.2	Reference material for foliar and litterfall analysis	7
3.1.3	Reference material for soil analysis	7
3.2	CONTROL CHARTS	9
3.2.1	Mean Charts (X-Charts)	9
3.2.2	Range Charts (R-Charts)	10
3.2.3	Blank Charts	10
3.3	DETECTION AND QUANTIFICATION LIMITS	11
3.4	CHECKING ANALYTICAL DATA	13
3.4.1	Checking results of water samples	13
3.4.2	Checking results of organic and mineral soil samples	24
3.4.3	Checking results of foliage and litterfall samples	29
3.4.4	Analyses in duplicate	31
3.4.5	Avoidance of contamination	31
3.5	INTER-LABORATORY QUALITY ASSURANCE	33
3.5.1	Inter-laboratory comparison tests (ring tests)	34
3.5.2	Exchange of knowledge and expertise amongst laboratories	38
3.6	QUALITY INDICATORS	39
3.6.1	Percentage of the results of a ring test within tolerable limits	40
3.6.2	Percentage of the results of a ring test with a precision <10%	40
3.7	QUALITY REPORTS	40
4	REFERENCES	41
ANNEX I		43
I.1	EXCEL WORKSHEET FOR ION BALANCE (WITH AND WITHOUT DOC CORRECTION), CONDUCTIVITY, N BALANCE AND NA/CL RATIO CHECKS	43
I.2	EXCEL WORKSHEET FOR CONTROL CHARTS	43
I.3	LIST OF COMMERCIALY AVAILABLE REFERENCE MATERIALS	44
I.4	DEFINITIONS AND TERMINOLOGY	45
ANNEX II	MINOR CHANGES AFTER 2020	48