

ICP Forests Draft manual 2010 Litterfall Chapter XIII changes

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MAJOR CHANGES

Laboratory procedures:

- Definition of the status of variables to be measured
- Harmonisation of drying temperature for weight and chemical analysis with foliar procedures
- Suggested flowchart for sample treatments
- Outline of methodology for determination of Specific Leaf area (SLA) from litterfall

Field procedure – definition of the litterfall year

Status of variables for measurements at various levels

(Note: optional nature of all measurements for standard Level II sites, mandatory measurements of weight from 'core' sites and chemical elements for reporting from litter analysis at these sites)

Form	Variable	Level I	Level II	Level II core
Biomass measures				
LFM	Dry weight per m ² [g/m ²] for total litter biomass	n	o	m
LFM	Dry weight per m ² [g/m ²] for foliar litter biomass	n	o	m
LFM	Dry weight per m ² [g/m ²] for other litter biomass	n	o	m
LFM	Dry mass of 100 leaves or of 1000 needles [g]	n	o	o
LFM	Area of 100 leaves or of 1000 needles [m ²]	n	o	o

o - optional m - mandatory n – not assessed

Chemical analyses		Level I	Level II	Level II core
LFM	C [g/100g]	n	o	m
LFM	N [mg/g]	n	o	m
LFM	S [mg/g]	n	o	m
LFM	P [mg/g]	n	o	m
LFM	Ca [mg/g]	n	o	m
LFM	Mg [mg/g]	n	o	m
LFM	K [mg/g]	n	o	m
LFO	Zn [µg/g]	n	o	o
LFO	Mn [µg/g]	n	o	o
LFO	Fe [µg/g]	n	o	o
LFO	Cu [µg/g]	n	o	o
LFO	Pb [µg/g]	n	o	o
LFO	B [µg/g]	n	o	o
LFO	Cd [ng/g]	n	o	o

Drying temperature

- harmonised with foliar analysis at max 70°C for mass recording, chemistry analysis and SLA calculation
- Chemistry reported on subsample weights dried to 105°C

Plausibility limits and inter-laboratory limits for chemical composition

- To be updated as test material becomes available

Flow chart supplied to suggest laboratory procedure for obtaining annual measures of weight, chemistry and SLA from monthly litterfall inputs ([manual p. 12](#))

The Litterfall year

To make a change away from the calendar year, following suggestions from several beneficiary nations, to spring to spring (April yr 1 to March yr 2) calculation of annual litterfall totals

Rationale

- Commencement of the litterfall year to coincide with new annual growth (bud burst) in spring
- Enable northern and high altitude sites to be accessed, cleared and restarted after winter
- To incorporate seed held in the canopy over-winter into the correct year of production

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