NSP
Nordic Standardization Programme
a cooperation between

Withdrawal from 2007-02-01 - SCAN-test methods of chemical character

Manganese content	**SCAN-CM 14:05** (withdrawn)	**ISO 1830:2005** (replacing SCAN)
Applicable to	Pulp and paper with ash content $\leq$ 3% acc to ISO 1762.	Paper, board and pulps (the acid-soluble part of the ignition residue acc to ISO 1762).
Principle	Ignition at 525 °C, dissolution in HNO_3, photometric end-determination. (AAS end-determination in SCAN-CM 38).	Ignition at 525 °C, dissolution in HCl. End-determination: flame AAS or ICP (inductively coupled plasma spectroscopy)
Procedure		
Ignition	525 ± 25 °C (ISO 1762)	525 ± 25 °C (ISO 1762)
Dissolution	In 1,5 mol/l HNO_3	In 6 mol/l HCl
Oxidation	Periodate	-
End-determination	Spectoophotometer at 525 nm	Flame AAS, the 279,5 nm line ICP, the 257,6 nm line
Duplicate determinations	Yes	Yes
Report	In mg/kg >1 mg/kg: 2 significant figures <1 mg/kg: 1 significant figure	In mg/kg with 2 significant figures

Total chlorine	**SCAN-CM 51:91** **SCAN-P 68:94** (withdrawn)	**ISO 11480:1997** (replacing SCAN)
Applicable to	Pulp, paper and board	Pulp, paper and board. Lower limit of determination 20 mg/kg
Principle	*Procedure A:* Schöniger combustion + IC or Schöniger combustion + titration *Procedure B* (AOX apparatus): Combustion in a heated quartz tube + micro-coulometric titration	No Schöniger procedure Combustion in a heated quartz tube + micro-coulometric titration
Procedure A	Samples with results >20 mg/kg (IC) Samples with results >200 mg/kg (titr)	No Schöniger procedure
Duplicate determinations	Yes	
Sample size	250 – 500 mg	
Combustion	In O_2 in Schöniger flask	
Schöniger flask, volume	750 – 1000 ml	
Ion chomatography	Fractionating column, chloride, conductivity detector	
Potentiometric titration with $AgNO_3$ solution	Silver electrode + mercury sulphate electrode or double junction calomel electrode	
Procedure B (AOX apparatus)		***AOX apparatus***
Duplicate determinations	Yes	Yes
Sample size	10 – 60 mg	10 – 60 mg
Combustion	In O_2 in a quartz tube	In O_2 in a quartz tube

Absorption	HCl is absorbed in electrolyte solution	HCl is absorbed in electrolyte solution
Micro-coulometric titration	Yes	Yes
Report	In mg/kg with 2 significant figures (procedure A and B)	In mg/kg with 2 significant figures

Organic chlorine	**SCAN-CM 52:91** **SCAN-P 69:94** (withdrawn)	**ISO 11480:1997** (replacing SCAN)
Applicable to	Pulp, paper and board with OCl content > 20 mg/kg	Pulp, paper and board. Lower limit of determination 20 mg/kg.
Principle	*Procedure A*: Schöniger combustion + IC *Procedure B* (AOX apparatus): Combustion in heated tube + micro-coulometric titration	No Schöniger procedure *AOX procedure* Combustion in heated tube + micro-coulometric titration
Procedure A	OCL content: 100 - 25000 mg/kg	No Schöniger procedure
Duplicate determinations	Yes	
Sample size	200 – 500 mg	
Washing	With $NaNO_3$	
Filtration	Yes	
Combustion	In O_2 in Schöniger flask	
Schöniger flask, volume	750 – 1000 ml	
Ion chomatography	Fractionating column, chloride, conductivity detector	
Procedure B	OCL content: 10 - 25000 mg/kg	
Duplicate determinations	Yes	Yes
Sample size	10 – 60 mg	10 – 60 mg
Washing	With $NaNO_3$	With $NaNO_3$ and activated Carbon
Filtration	Yes	Yes
Combustion	In O_2 in a quartz tube	In O_2 in a quartz tube
Absorption	HCl is absorbed in electrolyte solution	HCl is absorbed in electrolyte solution
Micro-coulometric titration	Yes	Yes
Report	In mg/kg with 2 significant figures (procedure A and B)	In mg/kg with 2 significant figures

pH of aqueous extract	**SCAN-P 14:65** (withdrawn)	**ISO 6588-1:2005 Cold extraction (ISO 6588-2:2005 Hot extraction)** (replacing SCAN)
Applicable to	Paper	Paper board and pulps
Principle	Soaking in cold distilled water. The pH is measured.	Soaking in cold distilled water. Filtration and addition of a salt solution. The pH is measured.
Procedure		
Sample size	1,0 g	2,0 ± 0,1 g
Temperature	25 ± 5 °C	20 - 25 °C
Distilled water volume	20 ml + 50 ml	100 ml
Stirring time	30 s	-
Soaking time	1 h	1 h
Filtration	No	Yes + addition of a salt solution
pH measurement	Glass electrode	Glass and calomel electrodes or a

		combined ectrode
Duplicate determinations	Yes	Yes
Report	To the nearest 0,1 pH unit	To the nearest 0,1 pH unit