



ANALYTICAL RESULTS

AU720-0000882/04-005

To: Richard Fawkes
Gunns

Request No: N882
Date: 19 December 2005

Job Description: Analysis of dust

Samples:

N882-1: A glass fibre filter containing grey residue

Request:

Analyse the grey residue

Method:

A typical portion of the grey residue was removed from the filter and analysed (after coating with carbon), using scanning electron microscopy (SEM/EDXA).

Subsequently, another portion of the residue was washed with Milli-Q distilled water. The water-soluble fraction was air-dried on a plastic film and the dried residue on the plastic film was analysed similarly.

Results:

The grey residue was found to contain predominantly sodium (Na) and chloride (Cl), along with minor components of other elements.

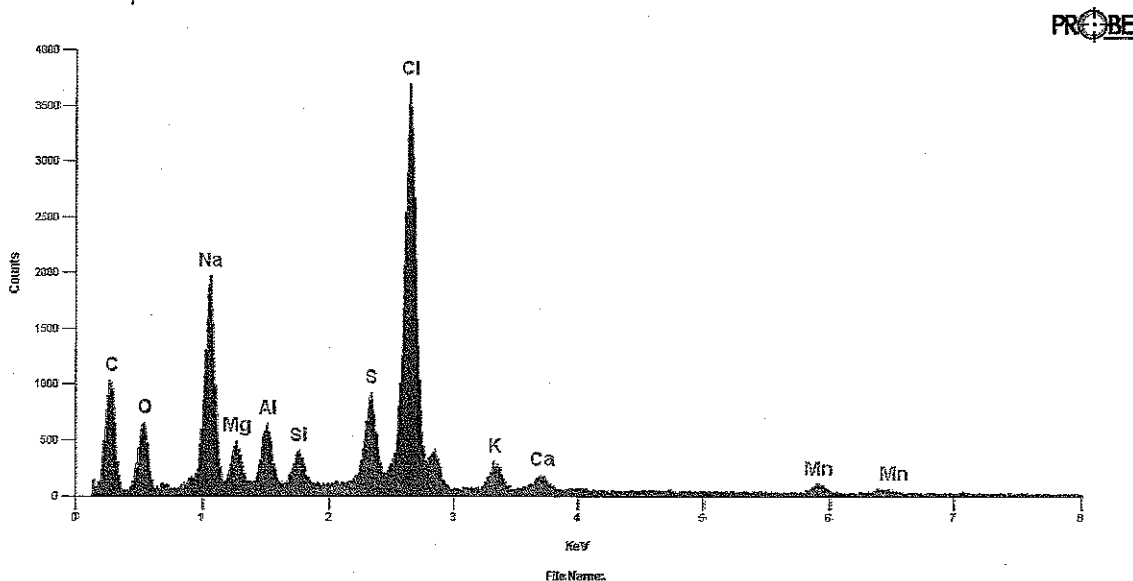
The water-soluble residue (of the grey residue) mounted on the clear plastic film showed up as dendritic crystals (characteristic of sodium chloride crystals) at high magnifications. The dendritic crystals were found to contain mainly Na and Cl.

The above findings infer strongly that the grey residue on the glass fibre filter contains mainly sodium chloride.

The spectral data in supporting the above findings are shown below.

Dust from Filter

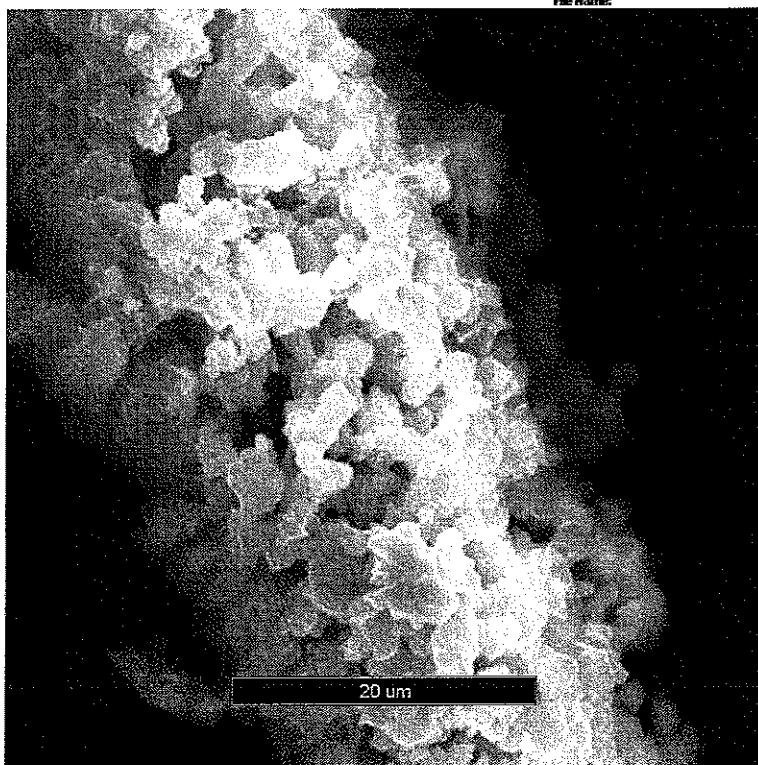
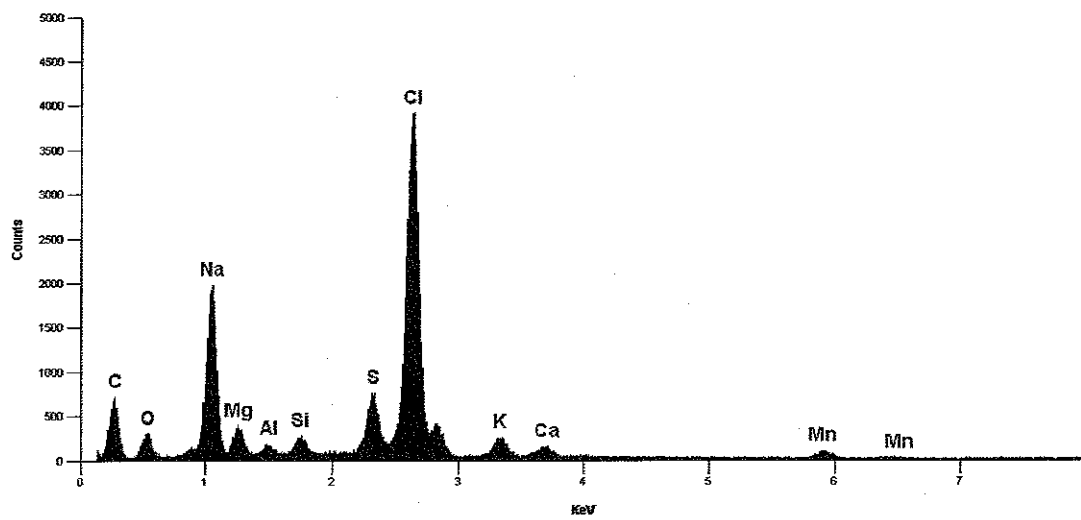
Dust scraped from filter



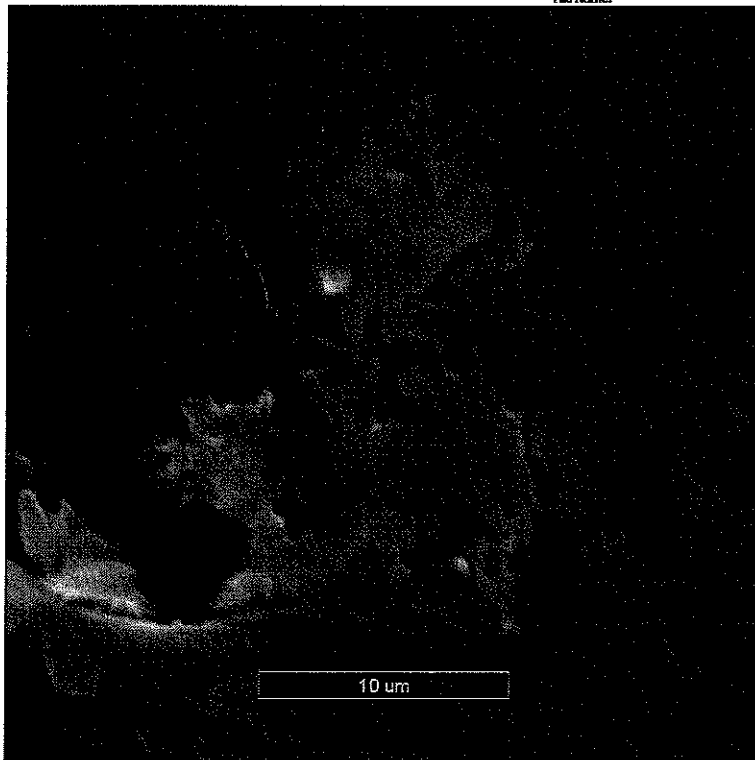
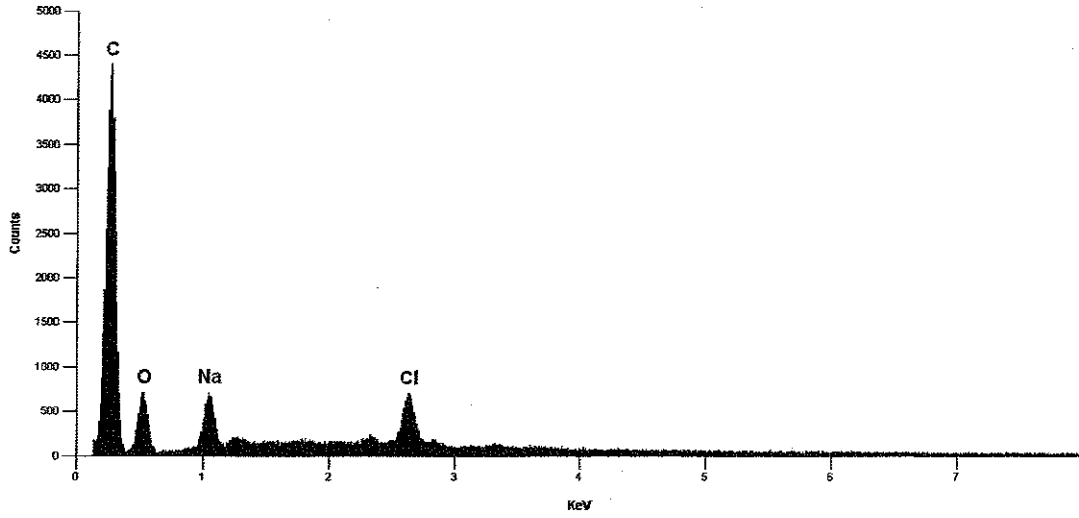
Quantitative Analysis Results - Standardless Analysis :

Element	Atoms%	Compound	Weight%	Error(±)	Norm%
Na	32.44	Na	24.93	0.18	24.93
Mg	7.24	Mg	5.88	0.10	5.88
Al	7.61	Al	6.86	0.11	6.86
Si	3.50	Si	3.28	0.10	3.28
S	7.73	S	8.28	0.17	8.28
Cl	35.37	Cl	41.92	0.38	41.92
K	3.08	K	4.02	0.15	4.02
Ca	1.58	Ca	2.12	0.15	2.12
Mn	1.47	Mn	2.70	0.25	2.70
<Total>	100.00		100.00		100.00

White crystalline material on top of filter



Salt crystals from water wash (grown on plastic = C,O)



Analysts: M. Rose *M. Rose*

Analysts' Reference: AN0413/160

Authorised by:

Josiane Edwards
J. Edwards

L:\SEC\PROBE\NMR Reports\2005reports\N882.doc

ANALYTICAL REPORT

AU720-0000577/2005-004

To: Richard Fawkes
Gunns Limited

Request No: N577
Date: 2 September 2005

Job Description: Analysis of Grey Residue on Glass Fibre Filter

Your reference: Grey residue on glass fibre filter surface

Sample(s) Received:

N577-1: A glass fibre filter containing grey residue

Request:

Analyse the grey residue

Analytical Methods:

A typical portion of the grey residue on the glass fibre filter as received was analysed (after coating with carbon), using scanning electron microscopy (SEM/EDXA).

Subsequently, another portion of the residue was washed with Milli Q distilled water. The water-soluble fraction was air-dried on a plastic film and the dried residue on the plastic film was similarly analysed.

Results: Grey residue on the glass fibre filter as received

The grey residue was found to contain predominantly sodium (Na) and chloride (Cl), along with minor components of other elements.

The relative proportions of heavy elements (atomic number heavier than Na) are (wt %):

Na: 27% Ca: 2%

Mg: 2% Mn: 4%

Al: 5%

Si: 6%

S: 4%

Cl: 50%

Individual particles containing Na and Cl (indicative of sodium chloride) were also detected in the residue. This prompted analysis of a water-soluble fraction.

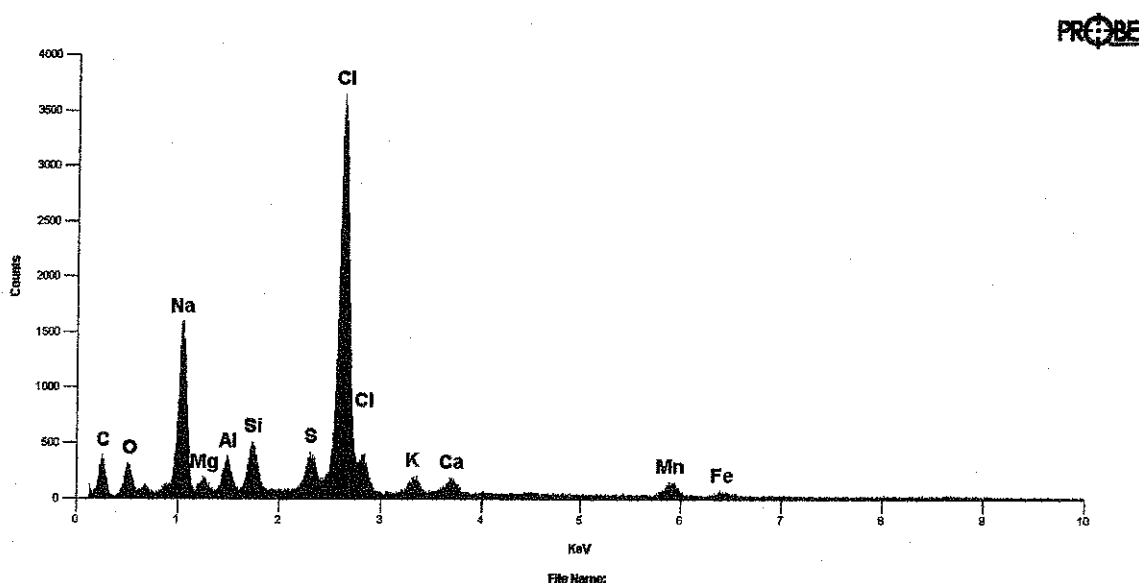
The water-soluble residue (of the grey residue) mounted on the clear plastic film showed up as dendritic crystals (characteristic of sodium chloride crystals) at high magnifications. The dendritic crystals were found to contain mainly Na and Cl.

Above findings infer strongly that the grey residue on the glass fibre filter contains mainly sodium chloride.

The spectral data in supporting above findings are shown below.

N577-1

RESIDUE ON GLASS FIBRE FILTER
GENERAL AREA OF RESIDUE AS RECEIVED
ELEMENTAL COMPOSITIONS

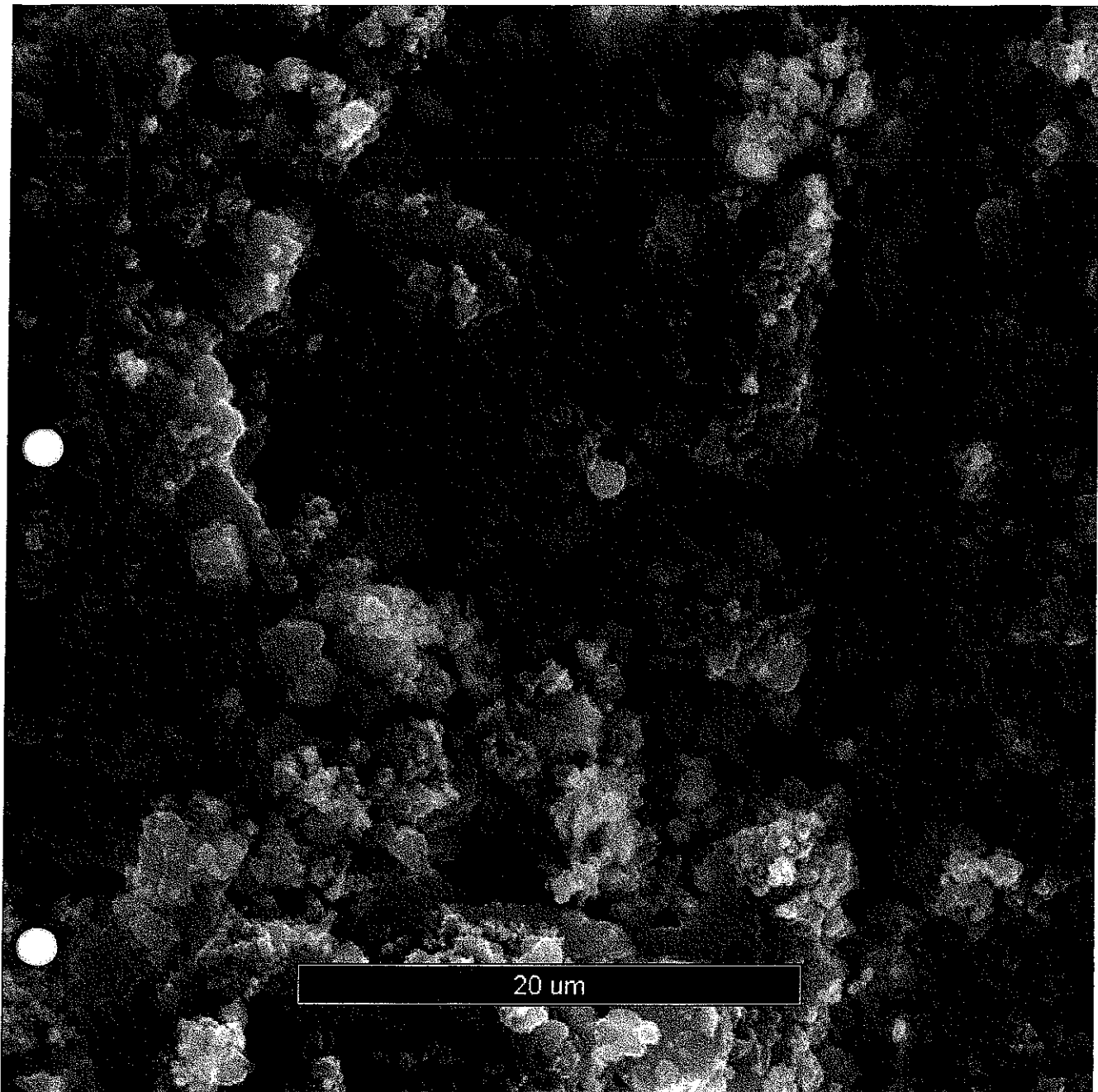


Quantitative Analysis Results - Standardless Analysis :

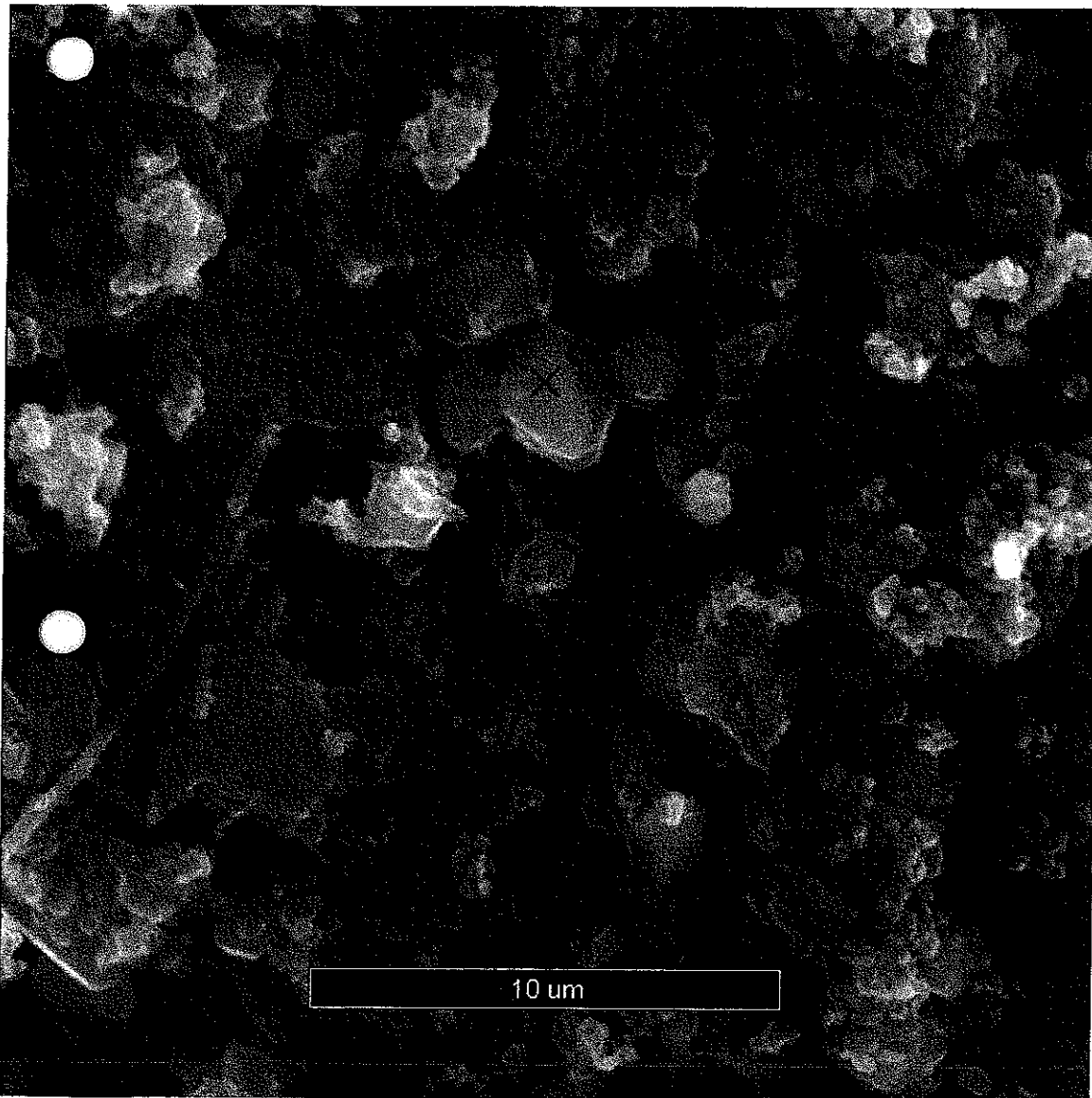
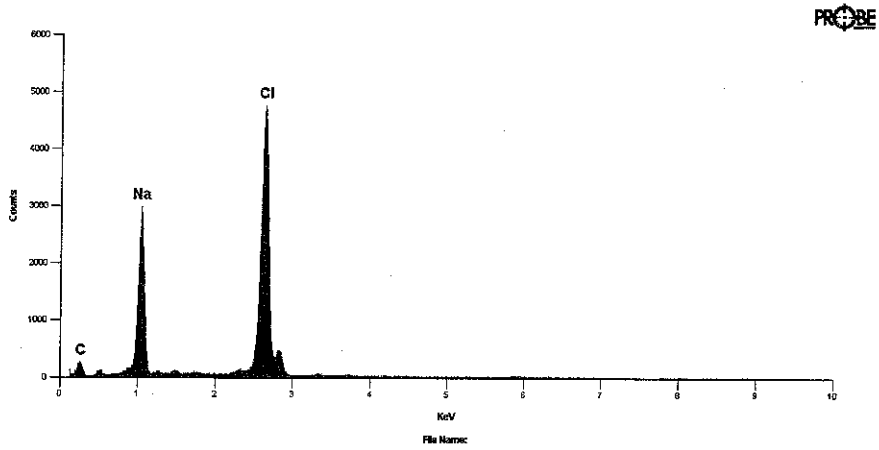
RELATIVE PROPORTIONS OF THE HEAVY ELEMENTS

Element	Atoms%	Compound	Weight%	Error(±)	Norm%
Na	35.08	Na	26.63	0.19	26.63
Mg	2.89	Mg	2.32	0.08	2.32
Al	5.01	Al	4.47	0.10	4.47
Si	6.22	Si	5.77	0.12	5.77
S	3.56	S	3.77	0.15	3.77
Cl	43.12	Cl	50.47	0.42	50.47
Ca	1.84	Ca	2.44	0.17	2.44
Mn	2.29	Mn	4.15	0.34	4.15

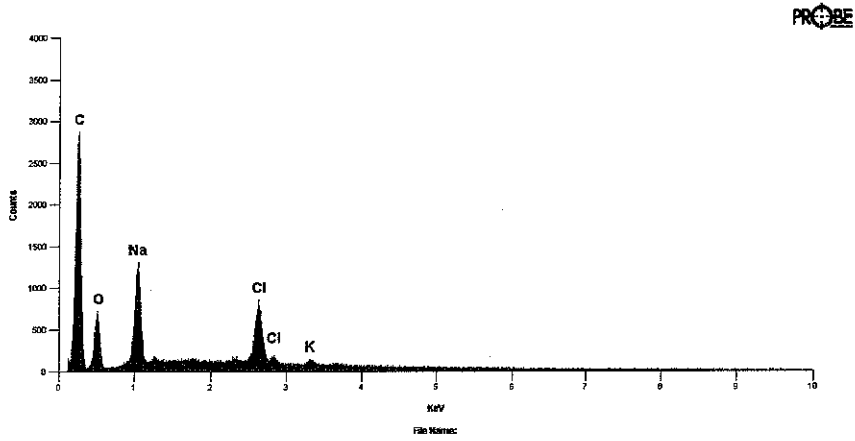
N577-1: SAMPLE AS ABOVE
PHYSICAL FEATURES



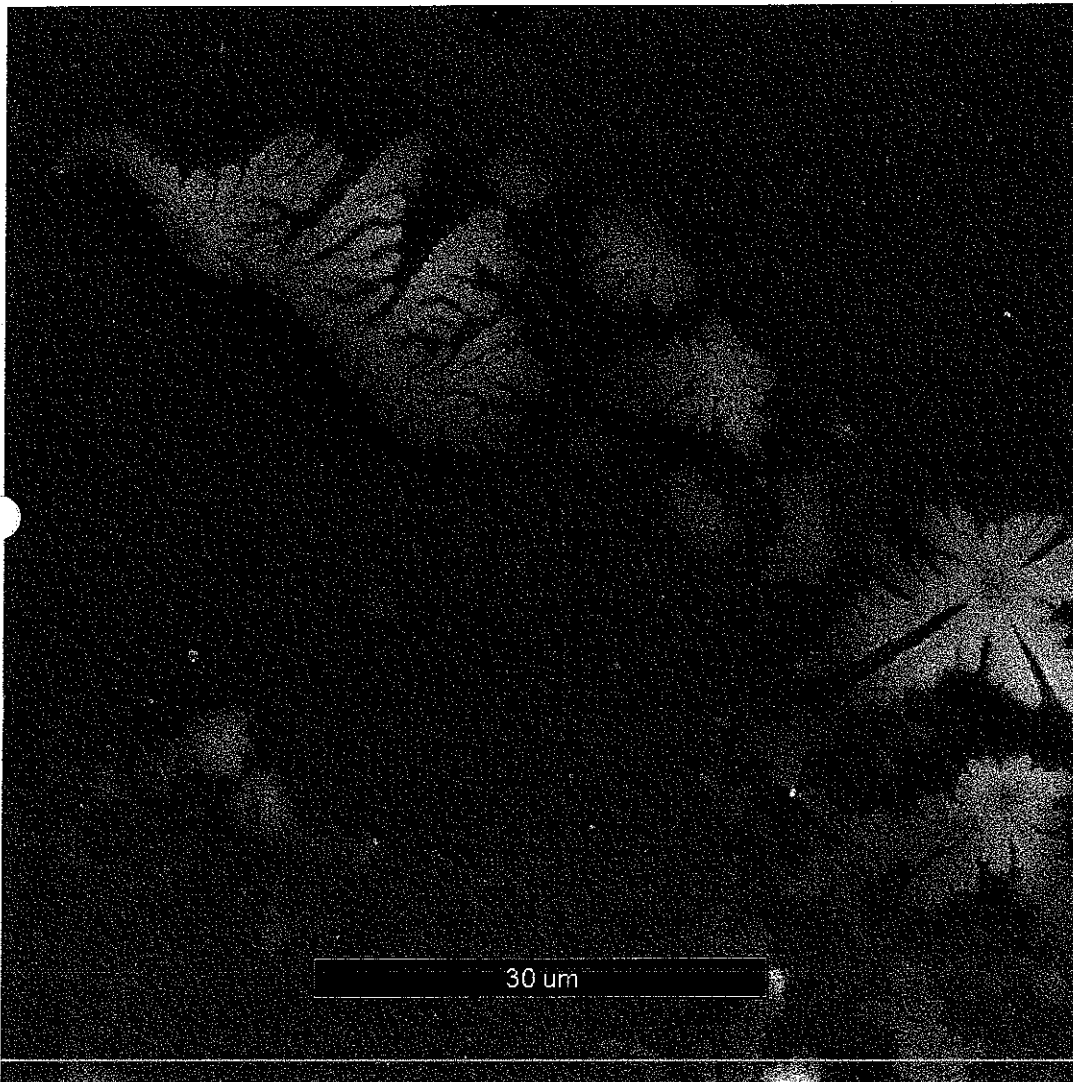
N577-1: SAMPLE AS ABOVE
FOCUSSED ON THE SODIUM CHLORIDE PARTILCES



N577-1: WATER-SOLUBLE FRACTION OF ABOVE SAMPLE
showing sodium chloride composition; (C & O were due to background)



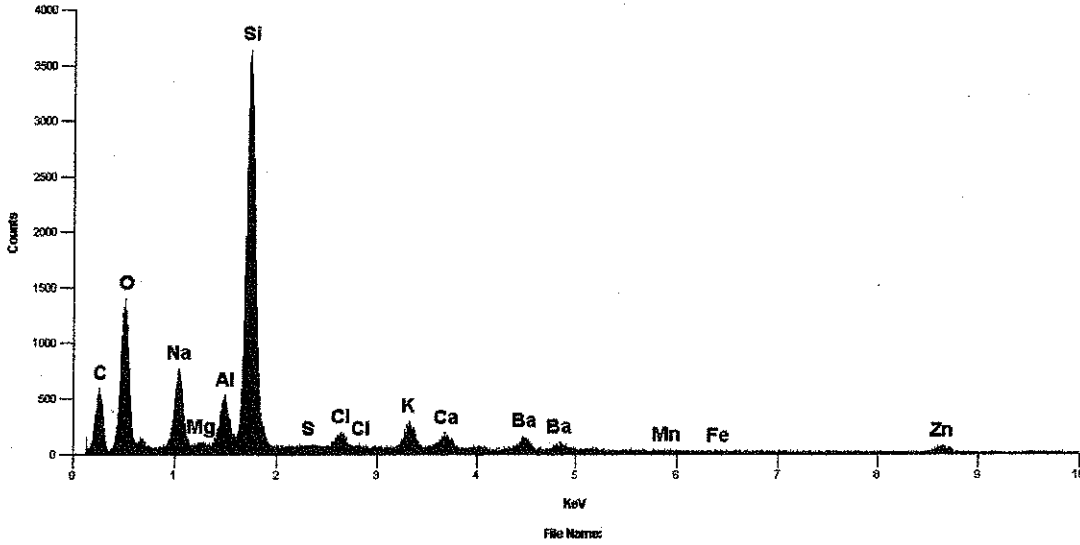
also showing the dendritic feature of sodium chloride crystals from water solution



N577-1a

THE ELEMENTAL COMPOSITION OF GLASS FIBRES, SERVING AS REFERENCE

PROBE



Analyst: *Lim Ong Lim ong*

Analyst's Reference: AN400/135

Authorised by: *Mark Rose Mustelhere*

THIS REPORT MAY ONLY BE REPRODUCED IN ITS ENTIRETY