



Loughborough Surface Analysis Limited

Pegasus House, 5 Prince William Road, Loughborough, LE11 5GU, UK
Tel: 44 (0)1509 260779, Fax: 44 (0)1509 230719, www.lsaltd.co.uk

TEST REPORT

Commercial and in Confidence

Report No: SI.E6.6590
Title: SIMS analysis of samples E01-E6,
E02-E6, 4.8-E6 and 3.6-E6

Client: Carmen Walters
Element Six Ltd
Global Innovation Centre
Fermi Avenue
Hawell
Oxford
OX11 0QR

Author: D.Lake
Date: 31 July 2017

A handwritten signature in black ink, appearing to be 'D E Sykes', written over a horizontal line.

Issue Approval:

D E Sykes

INTRODUCTION

Four samples, E01-E6, E02-E6, 4.8-E6 and 3.6-E6 were supplied for SIMS analysis of the boron depth profiles.

The samples were received on 21.7.17 and analysed on 24.7.17 and 27.7.17.

The samples were coated with a thin layer of gold prior to analysis to minimise sample charging problems.

EXPERIMENTAL CONDITIONS

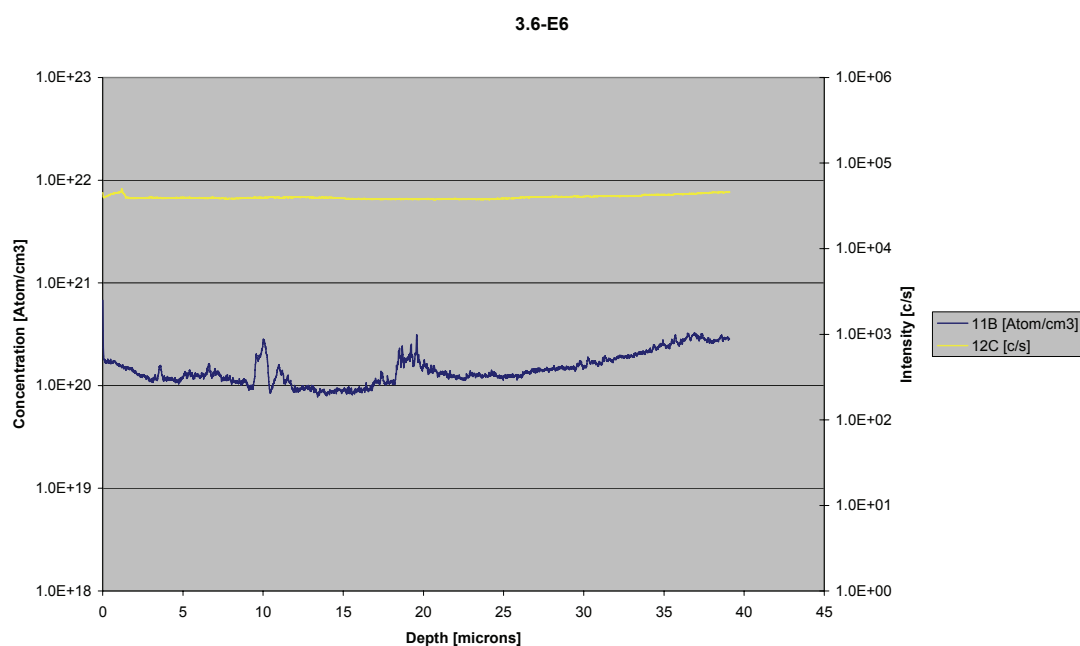
Primary ion species	O ₂ ⁺
Primary ion energy	15keV
Primary ion current	4μA
Raster size	125μm
Secondary ions	positive
Transfer lens	150μm
Analysed area	60μm
Contrast aperture	No 2
Mass resolution	300

ANALYSIS

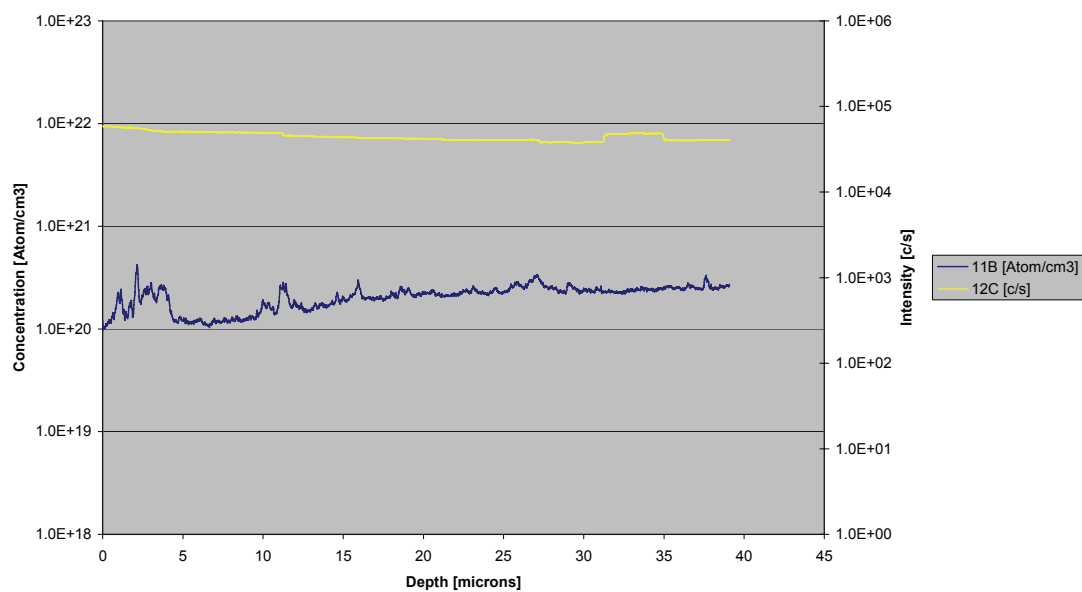
The samples were analysed using O_2^+ primary ion bombardment and positive secondary ion detection to optimise the sensitivity to boron.

The data were quantified using an implanted reference sample of B in C and the depth scales determined by measuring the sputtered crater depths using a Dektak 6M.

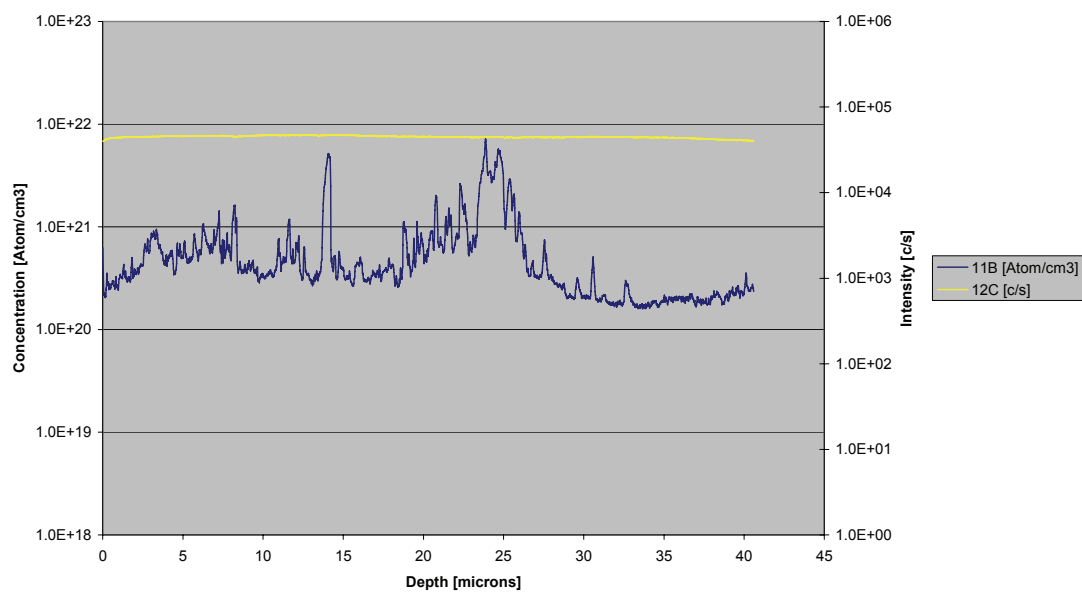
The resulting depth profiles follow.



4.8-E6



E02-E6



E01-E6

