

BRE Test Report

VOC content in paint sample

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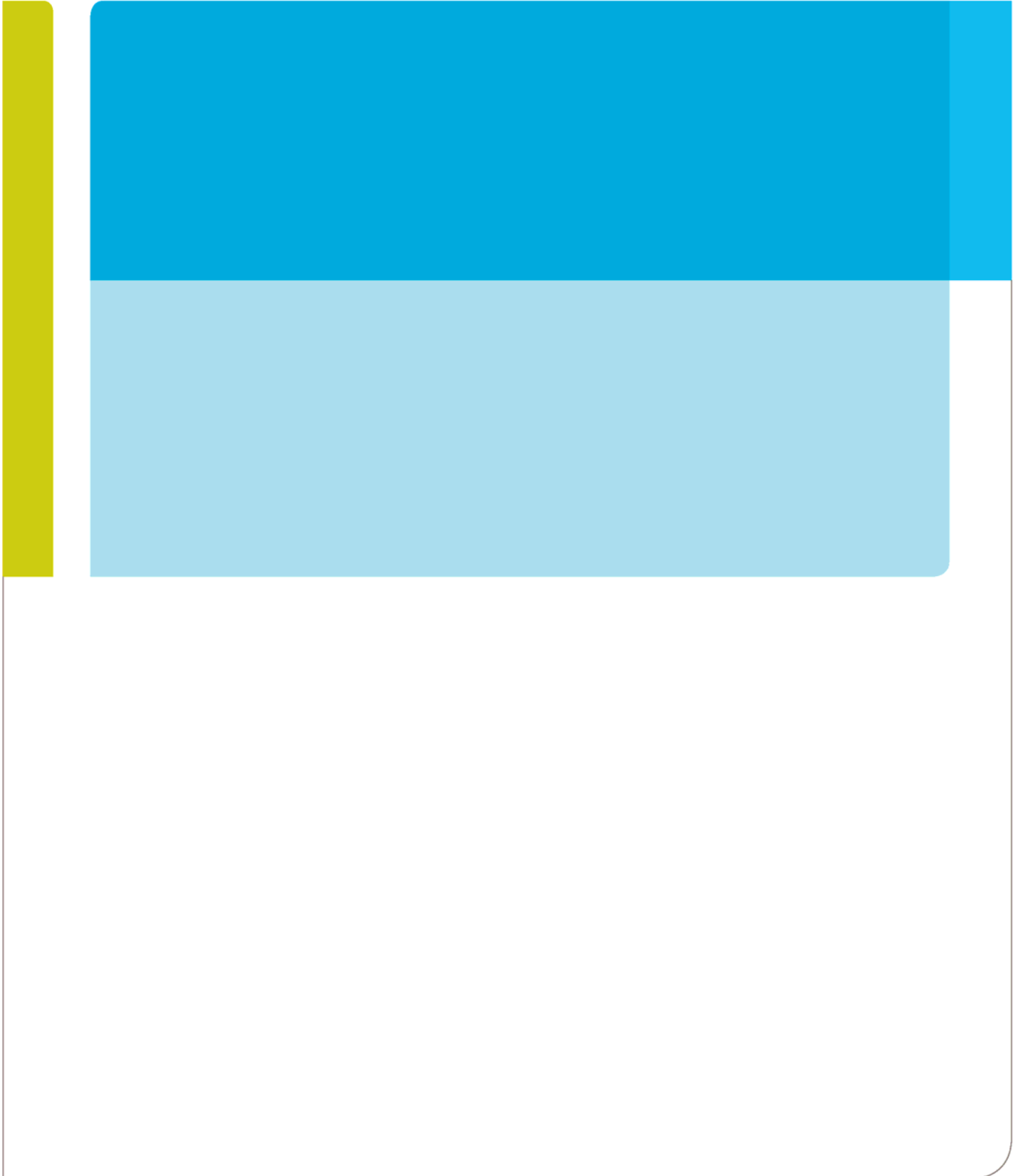
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1 Introduction

Sarah Haswell of The Graphene Company (London) Ltd. ("the Client") commissioned BRE for the investigation of the VOC content of one paint.

Two paint samples, 'AmbientPrimer paint' and 'AmbientPrimer paint with 1:1 water dilution' were delivered at BRE on 16 January 2018. Only the latter sample was to be analysed.



2 Test programme

Sarah Haswell of The Graphene Company (London) Ltd. ("the Client") commissioned BRE to undertake an investigation of the VOC content of one paint sample.

Two paint samples, 'AmbientPrimer paint' and 'AmbientPrimer paint with 1:1 water dilution' were delivered to BRE on 16 January 2018.

The 'AmbientPrimer paint 1:1 with water' was analysed according to the standard method ISO 11890-2 (*Paints and varnishes - Determination of volatile organic compound (VOC) content Part 2: Gas-chromatographic method*), with the exception that the diluted extract was injected to the GC using a thermal desorption tube.

The paint sample was diluted in methanol and analysed qualitatively to confirm the absence of iso-butanol (CAS no. 78-83-1) which was to be used as an internal standard (IS). After the qualitative analysis, a suitable quantity of iso-butanol (the IS) was added in the paint sample, which was then analysed for the VOC content by thermal desorption and gas chromatography (ATD/GC) using a flame ionisation detector (FID). The VOC content was quantified as total volatile organic content (VOCs, compounds having boiling points within 60-280°C) - as toluene equivalent.



3 Test results

Table 1: VOC content (w/w %) in paint sample.

Sample Identification	VOC content (w/w %) in paint
AmbientPrimer paint 1:1 with water	0.06%