

FRIEDMAN & BRUYA, INC.

ENVIRONMENTAL CHEMISTS

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October 15, 2024

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Eric Koltes
JS Held
18372 Redmond-Fall City Road
Redmond, WA 98052

RE: 65112.3, F&BI 702230

Dear Mr Koltes:

The question of interpretation of qualified NWTPH-Dx concentrations has arisen at this site. The proper application of the NWTPH-Dx method requires the quantitation of a sample against a similar fuel product. For NWTPH-Dx quantification, Friedman and Bruya, Inc. (F&B) uses a diesel fuel no.2 for middle distillate products and motor oil for residual range products. F&B also maintains a large library of fuel standards for sample comparison.

NWTPH-Dx concentrations affected by range overlap from a non-target product are reported with an "x" qualifier. For example, elevated motor oil concentrations in a sample will also cause qualified diesel range concentrations to be reported. NWTPH-Dx calibration ranges are set to integrate the majority of the chromatographic area associated with a target product. As a result, the lowest and highest boiling compounds in a product elute in neighboring reporting ranges. These overlapping compounds are accounted for in reported concentrations as a byproduct of the instrument calibration process.

For example, in the case of JS Held sample C7-WSW-1:3, the results were reported as 110 mg/kg in the diesel range (DRO) flagged with an "x" qualifier and 2,000 mg/kg motor oil range organics. Annotated chromatograms for the samples have been provided with peak identifications. Review of the C7-WSW-1:3 chromatogram shows that there is not a middle distillate product, such as diesel or heating oil, present in the sample. Considering the calibration compensation described above for range overlap, the oil-range concentration reported as 2,000 mg/kg is accurate and adding the 110 mg/kg DRO concentration would result in double counting or high bias

We appreciate this opportunity to be of service to you and hope you will call if you should have any questions.

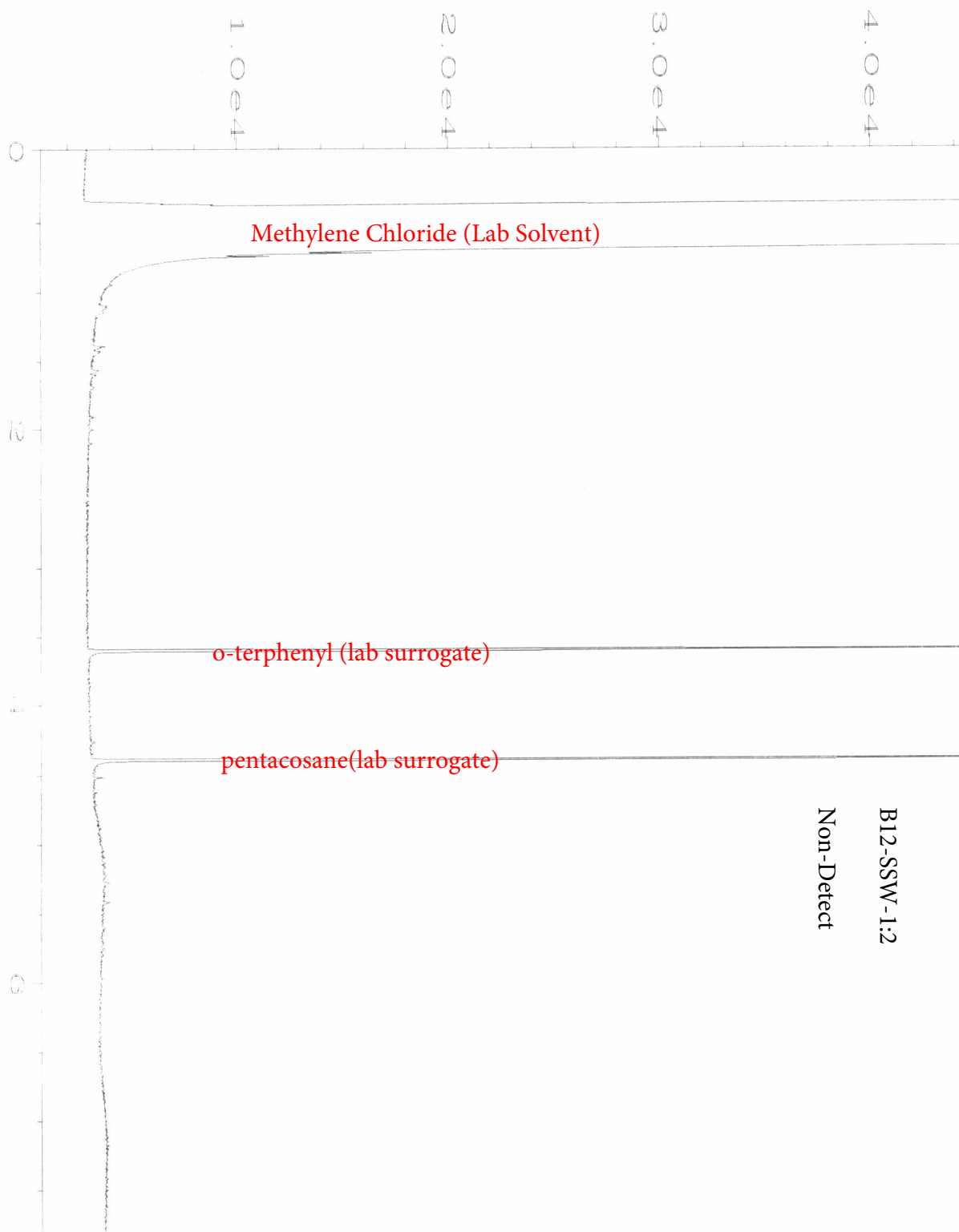
Sincerely,

FRIEDMAN & BRUYA, INC.



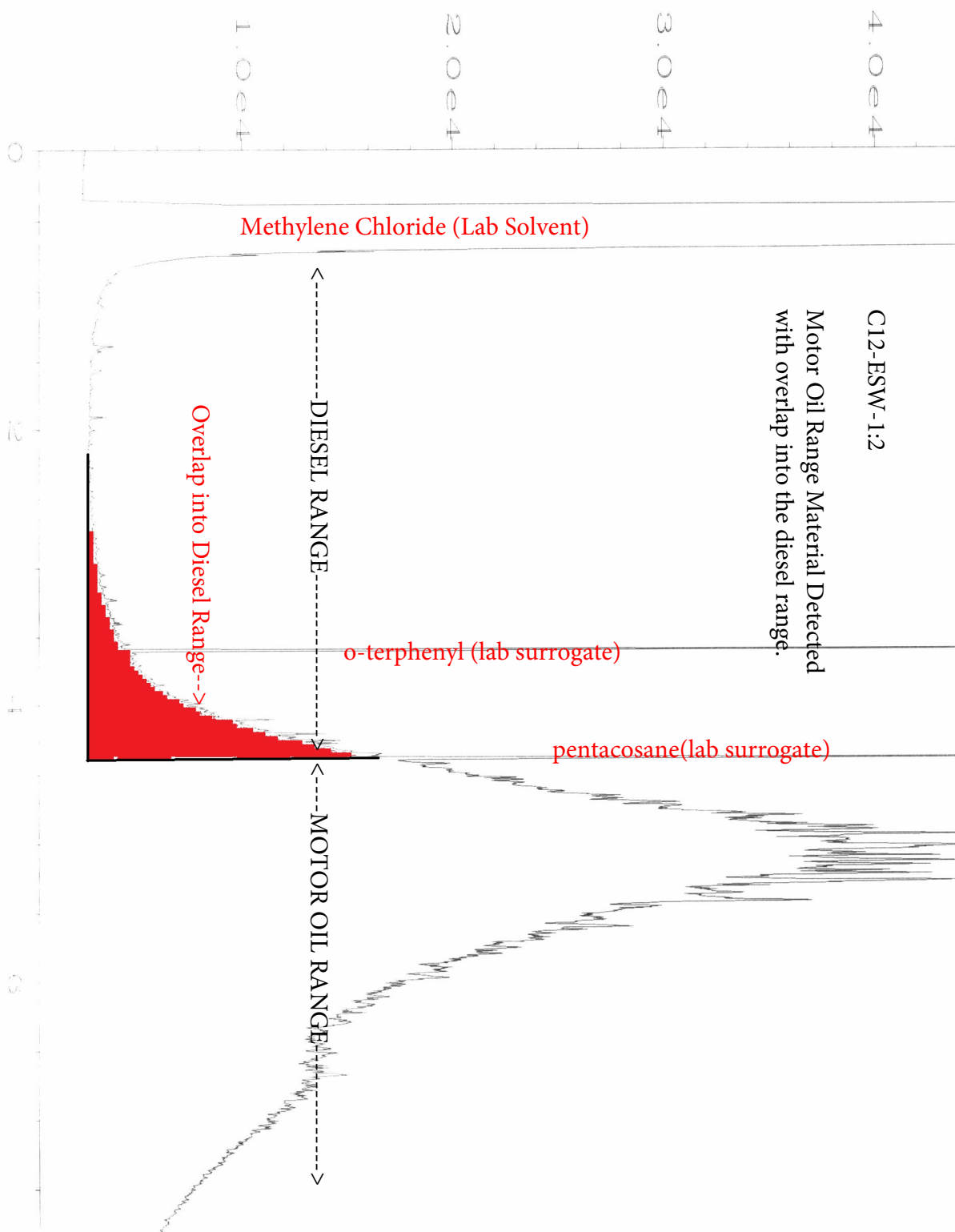
Michael Erdahl
Project Manager

Enclosures
c: Nate Hinsperger (report and invoice)
JSH1015R.DOC

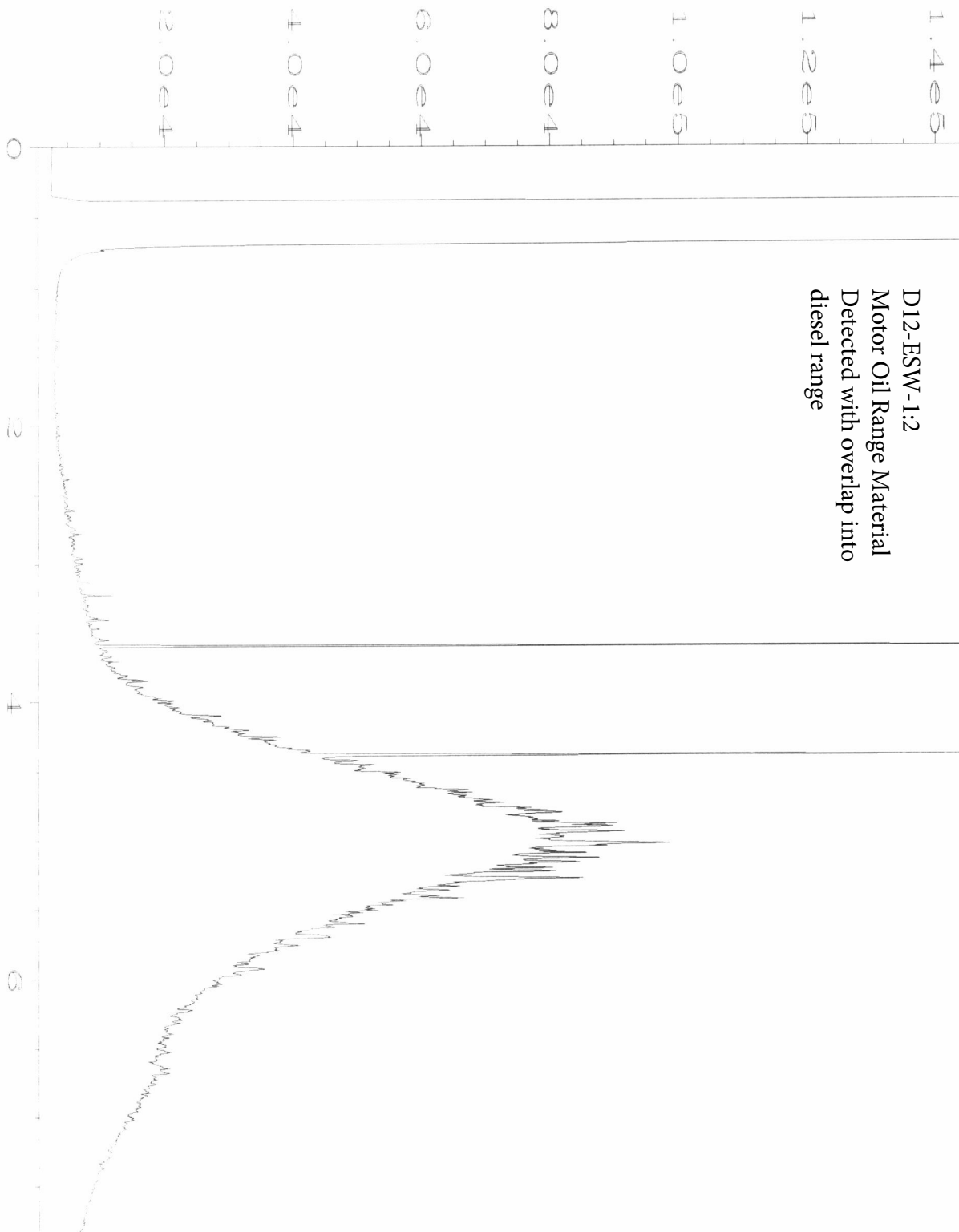


B12-SSW-1:2
Non-Detect

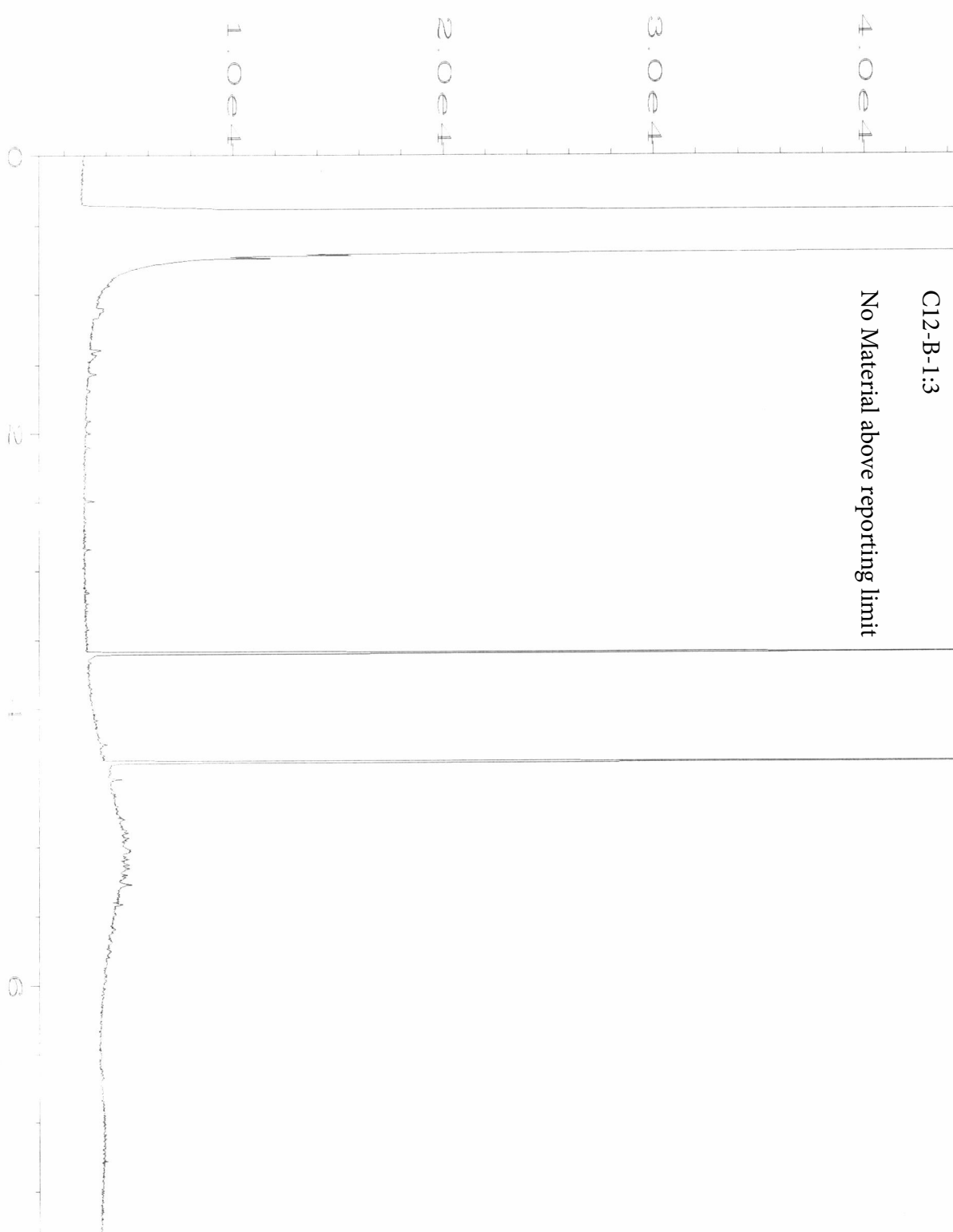
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Report Created on:	13 Sep 24 10:00 AM		



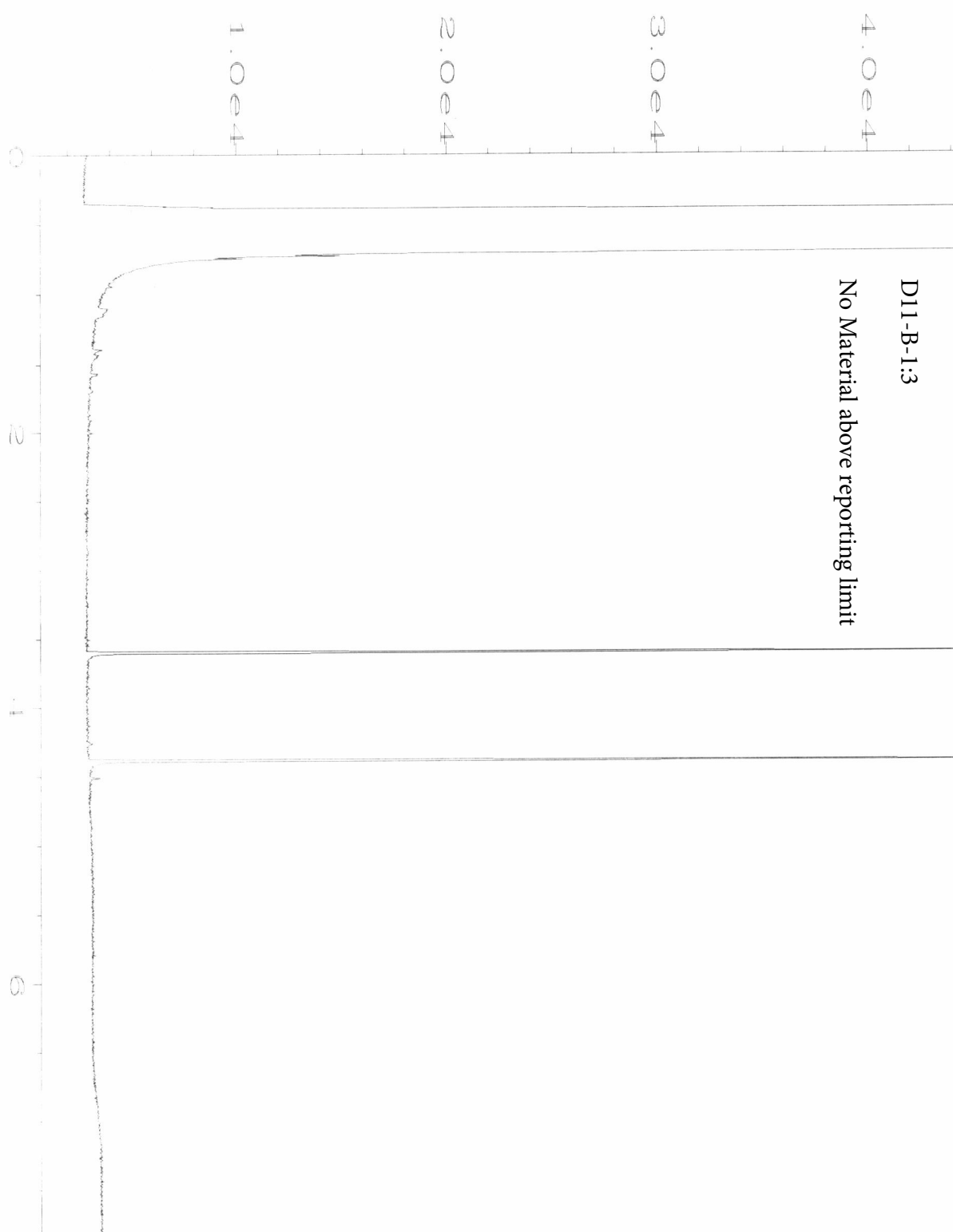
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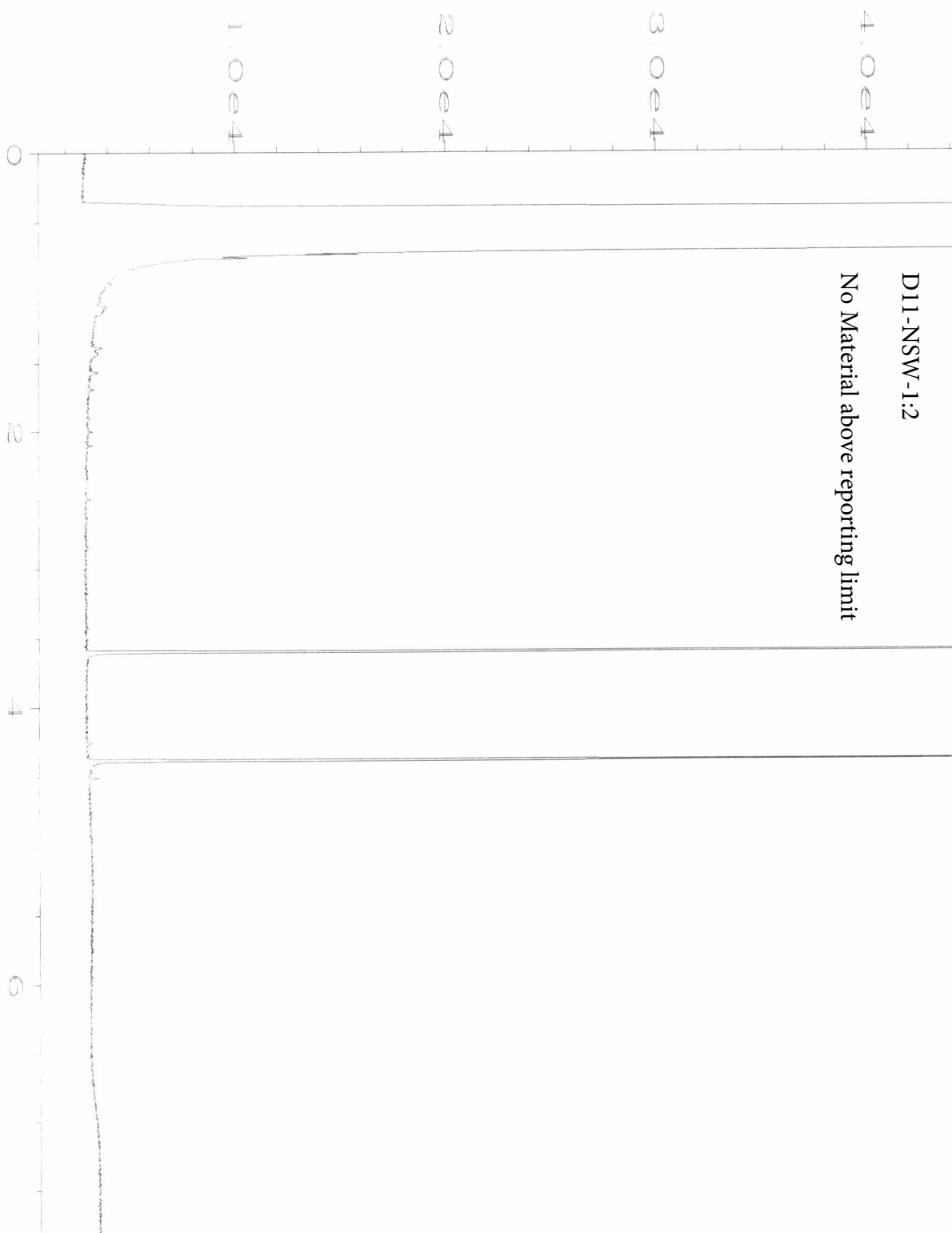
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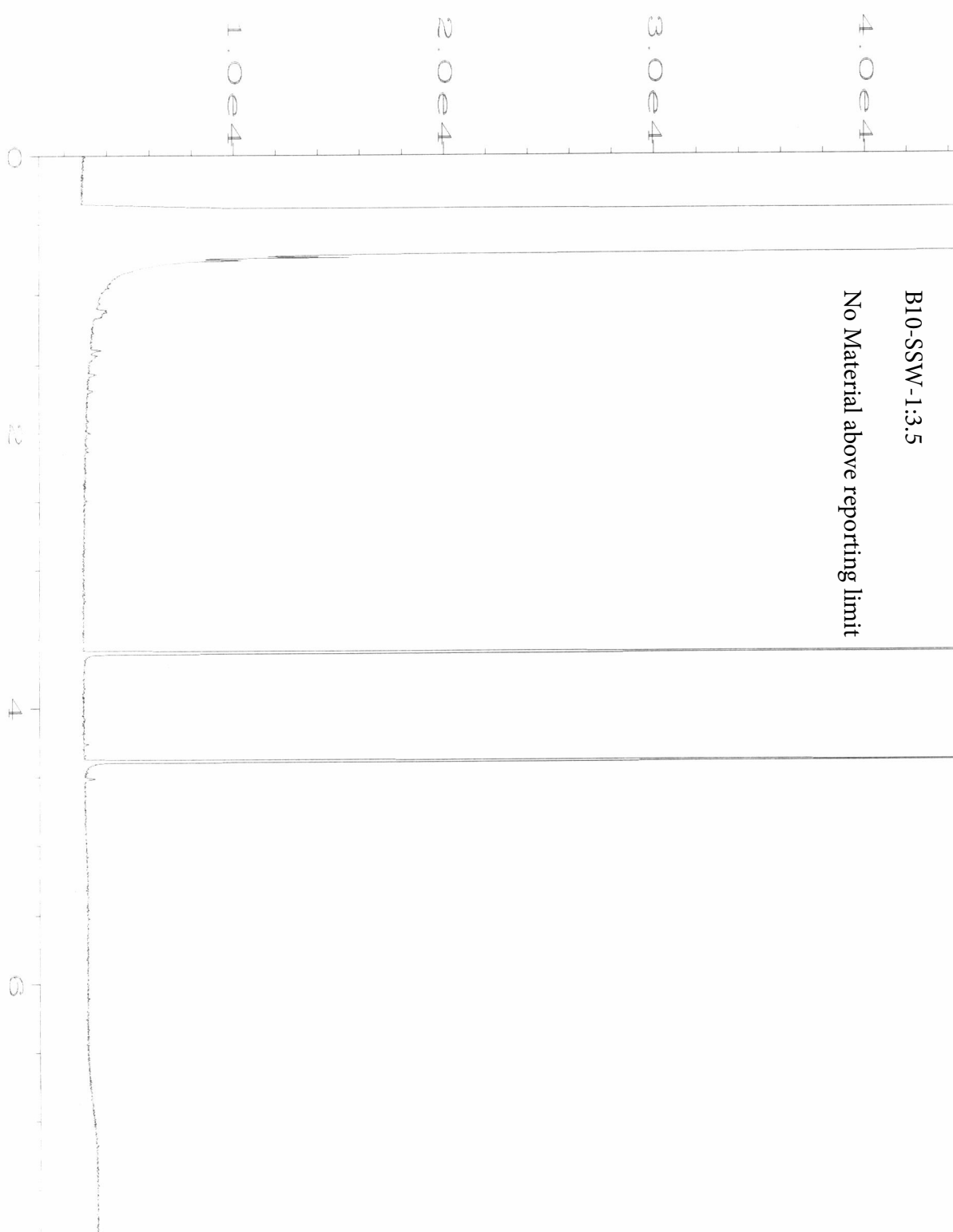
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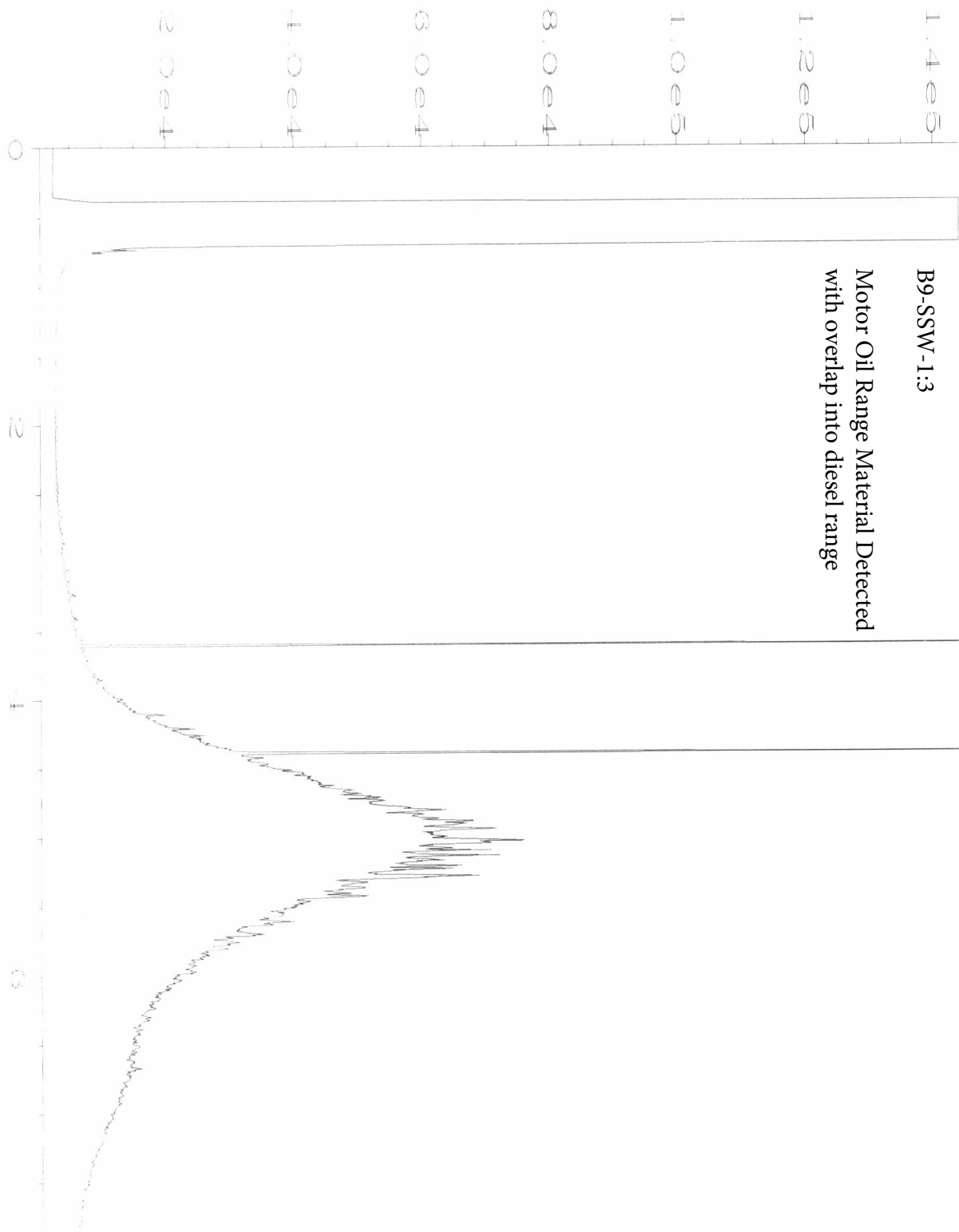
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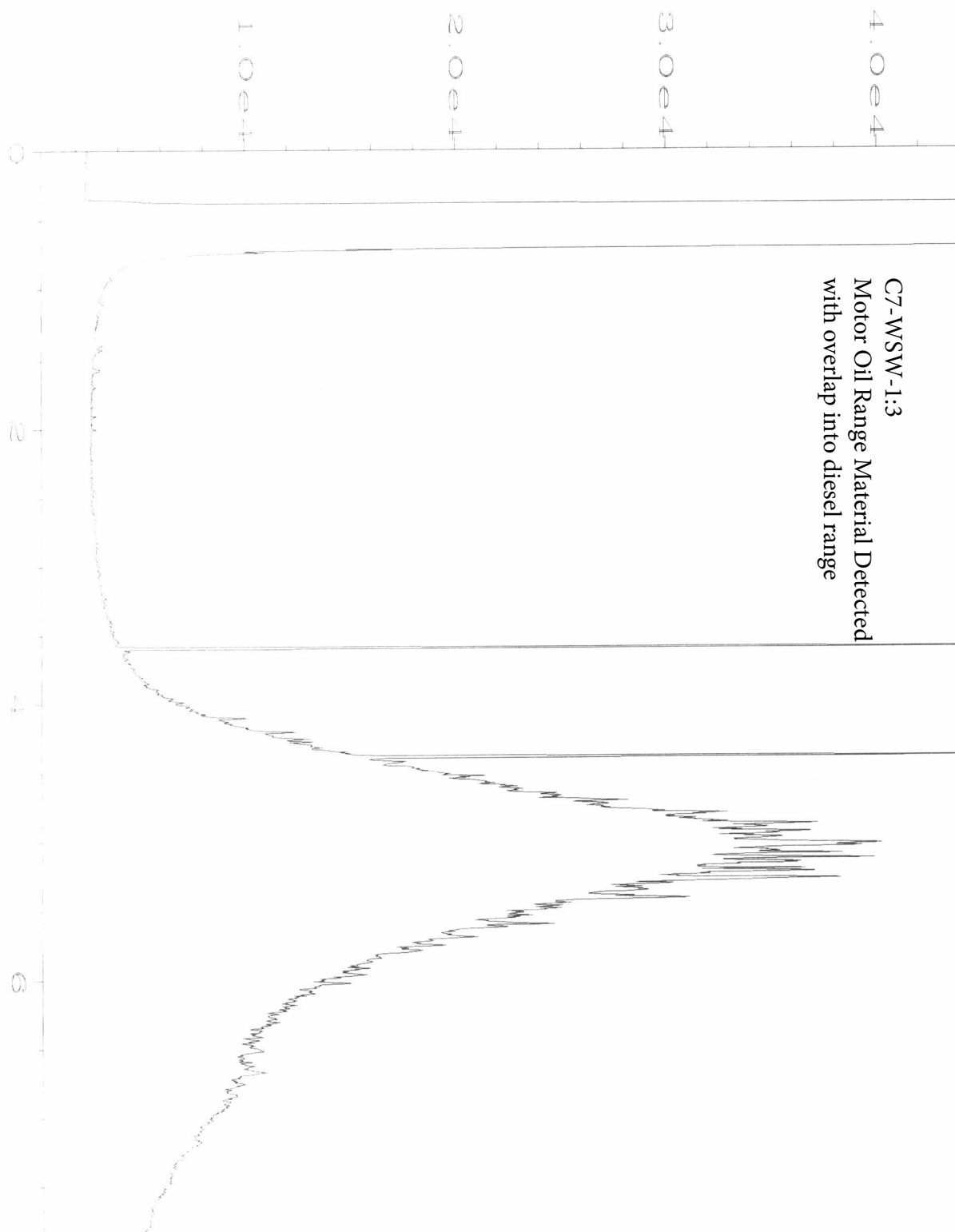
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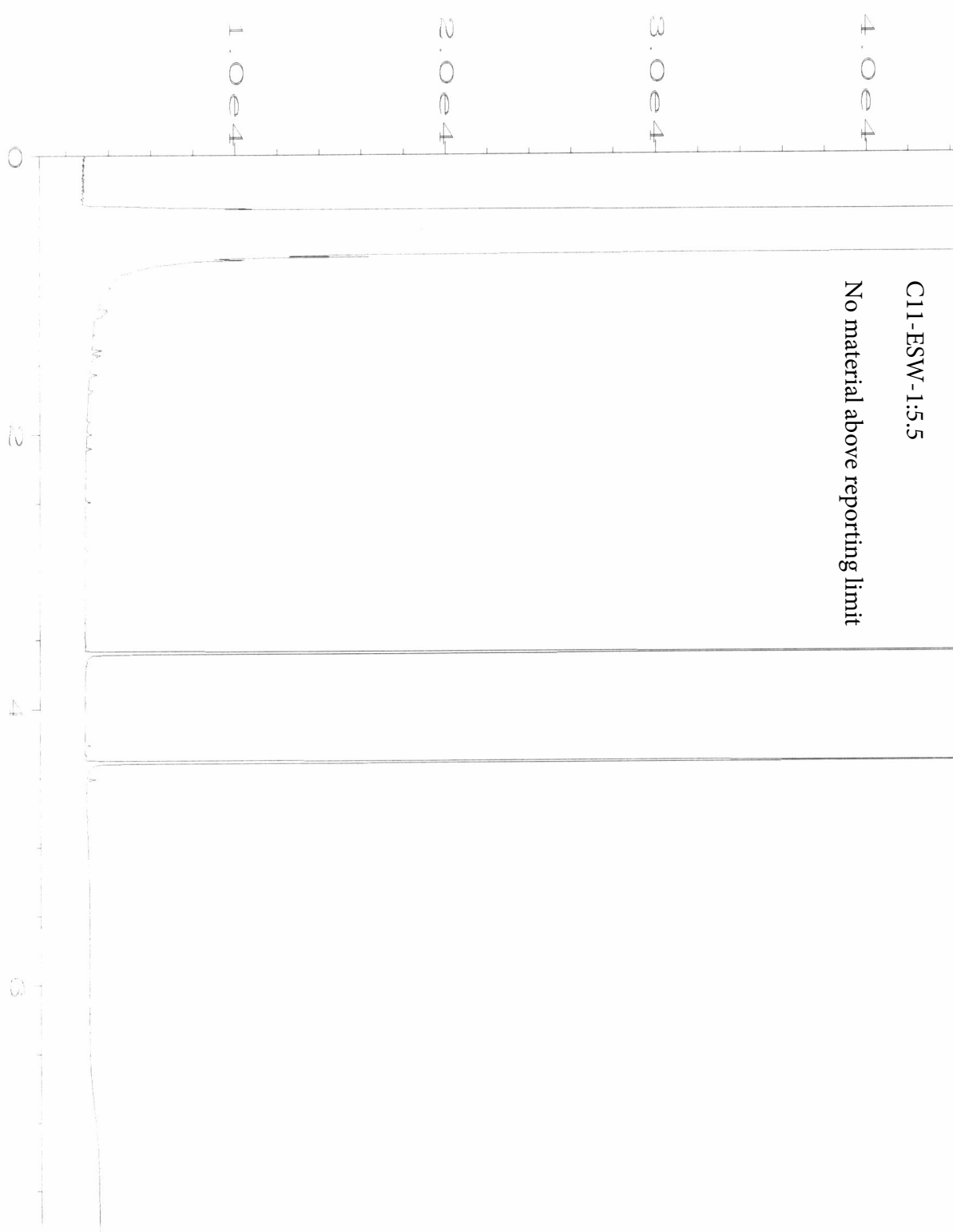
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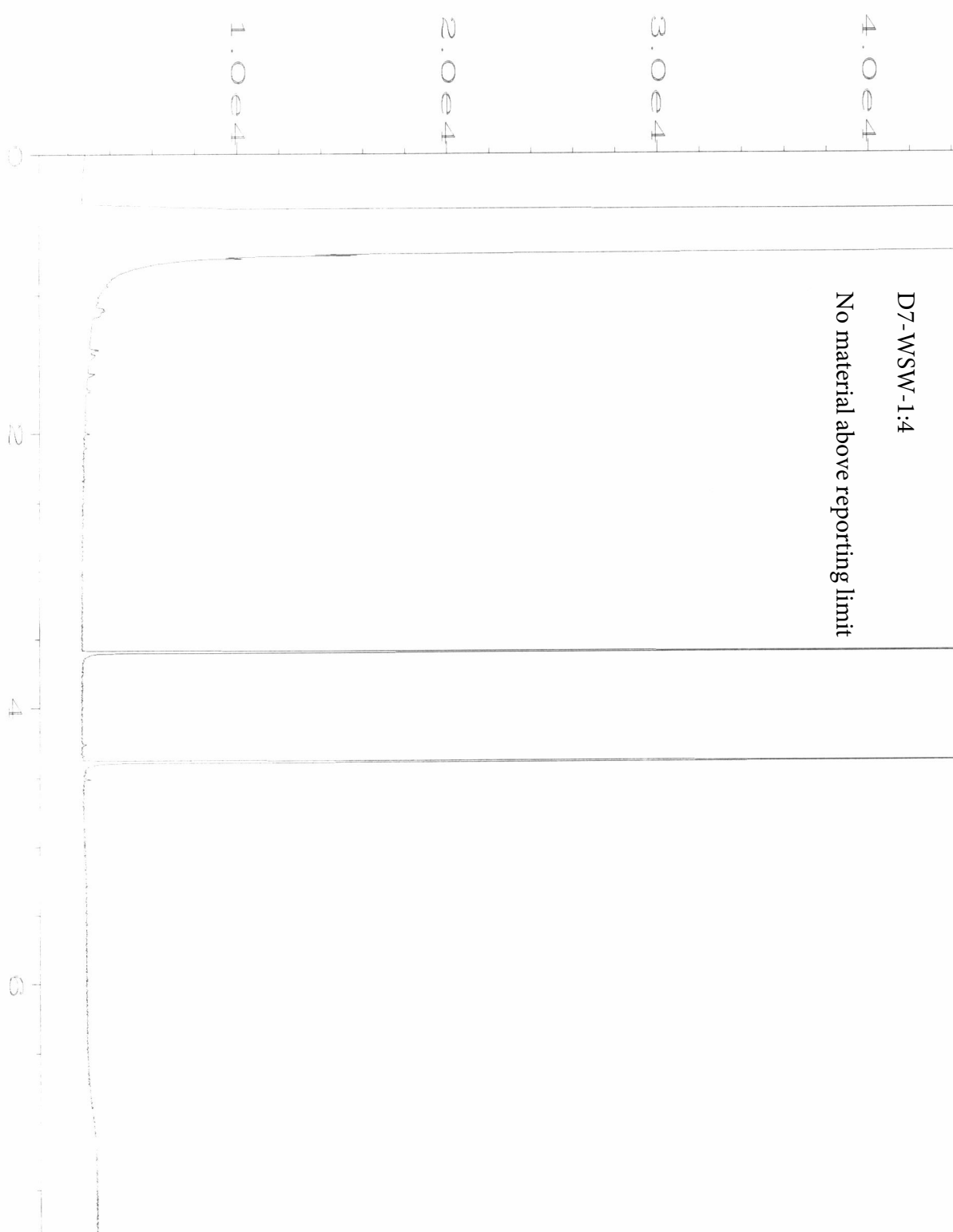
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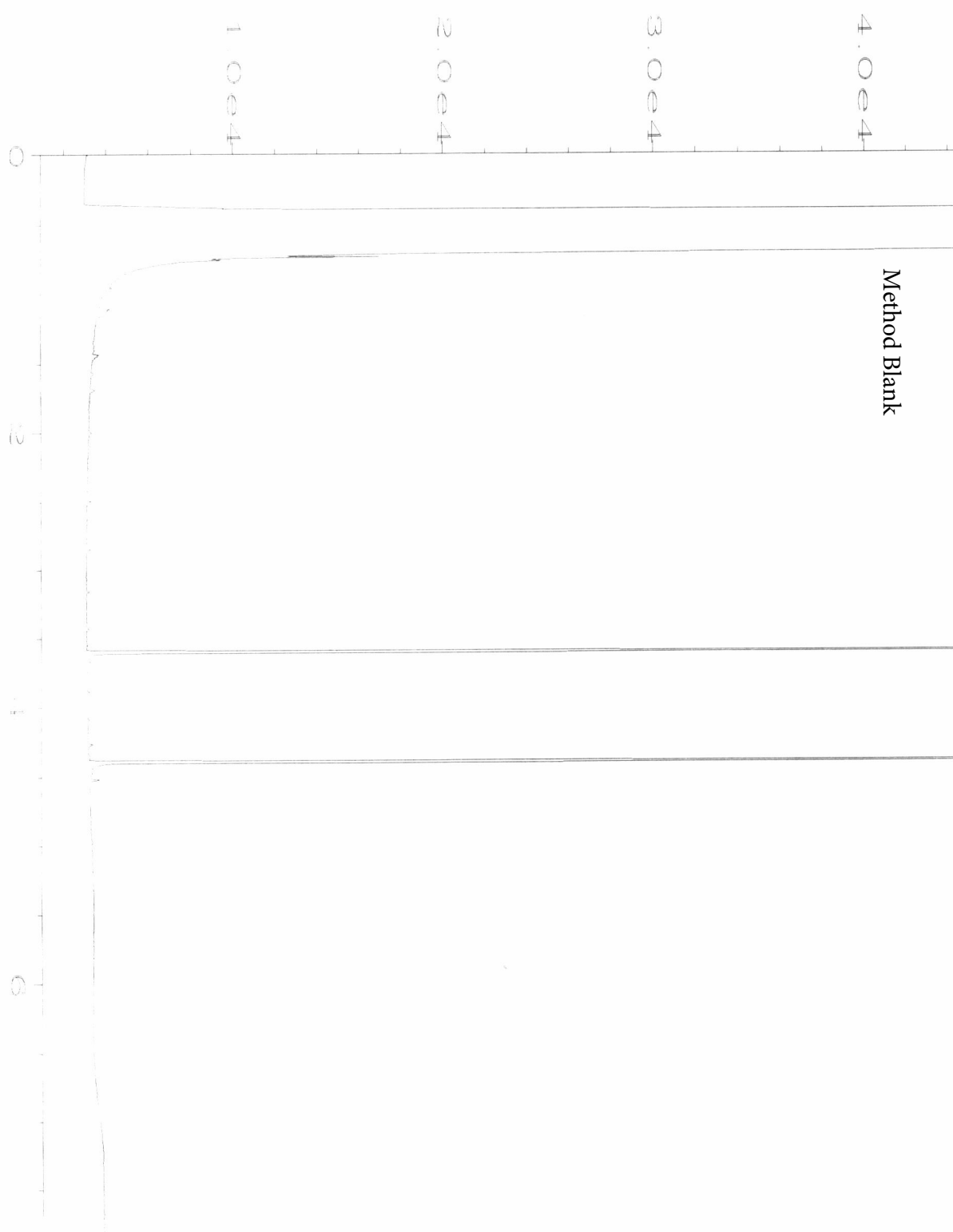
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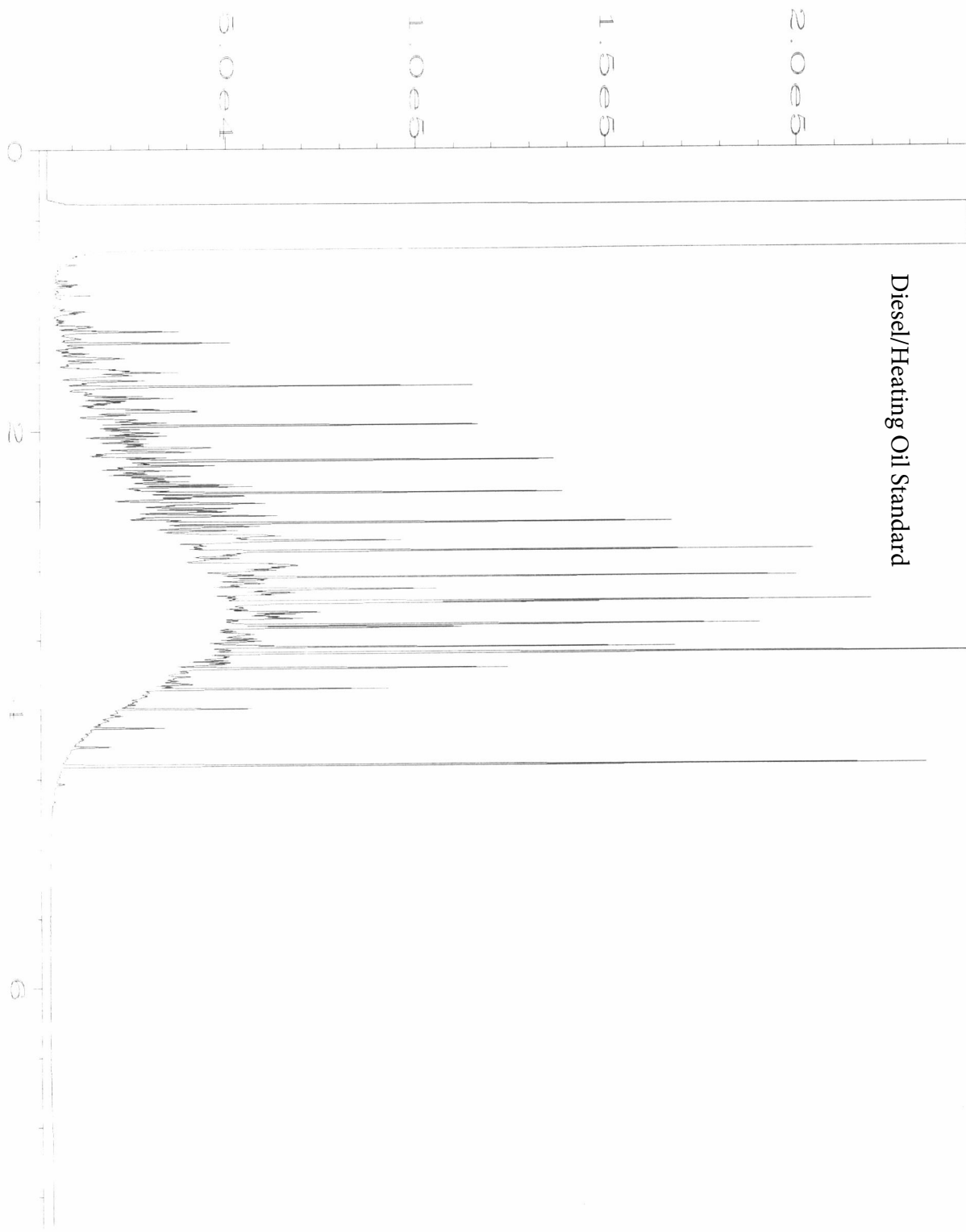
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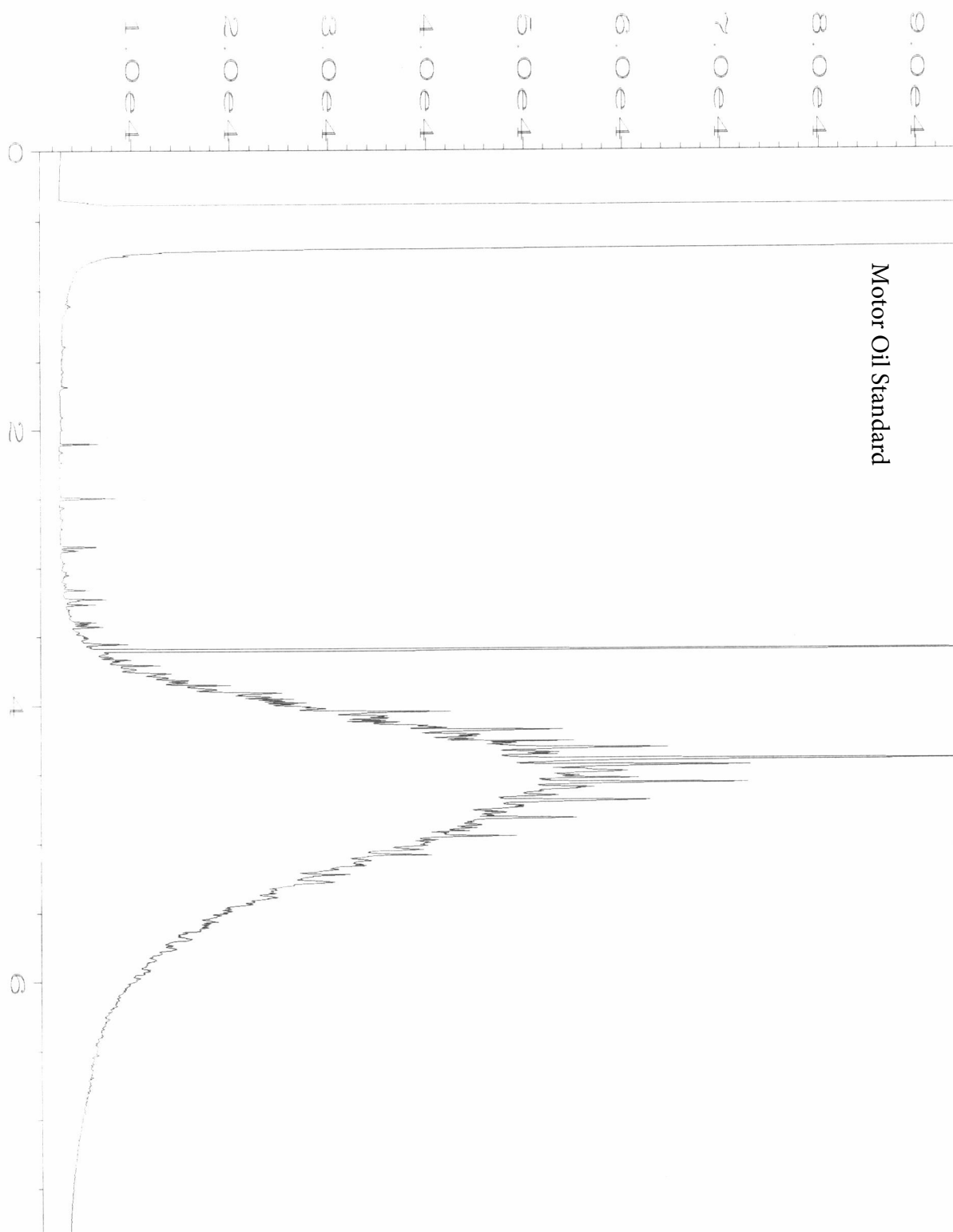
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Sample Name	: 500 Dx 48-20B	Sequence Line	: 3
Run Time Bar Code:		Instrument Method:	DX.MTH
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Instrument	: GC#4	Injection Number	: 1
Sample Name	: 500 MO 47-139B	Sequence Line	: 2
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