



IRP

INSTITUTO DE
RESTAURACIÓN DEL
PATRIMONIO
INSTITUTO UNIVERSITARIO DE INVESTIGACIÓN

FTIR spectroscopic study of the painted surface of the Mikado 141F engine

R+D Project AICO/2021/095

“Developing strategies against climate change for the preventive conservation of Valencian railway-tramway heritage”

Financial support by *Consellería de Innovación, Universidades, Ciencia y Sociedad Digital. Dirección General de Ciencia e Investigación. Subvenciones para la realización de proyectos I+D+i desarrollados por grupos de investigación consolidados 2021*

Authors:

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Miguel F. Silva

Date:

Valencia, 11th July 2022

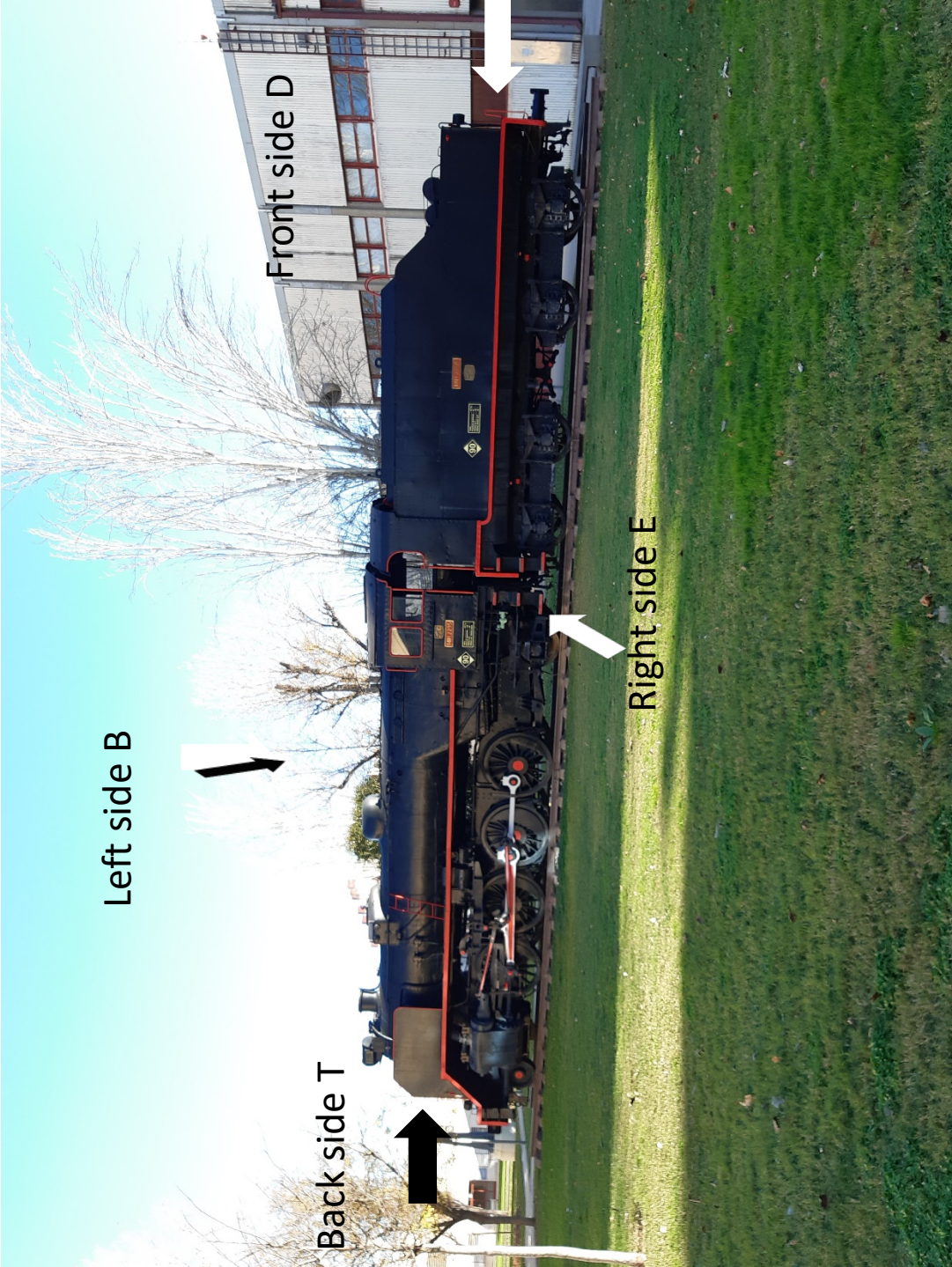
Instrumentation:

Vertex 70 supplied by Bruker with a FR-DTGS (fast recovery deuterated triglycine sulphate) temperature-stabilised coated detector and a MKII Golden Gate Attenuated Total Reflectance (ATR) accessory and a OPUS/IR software.

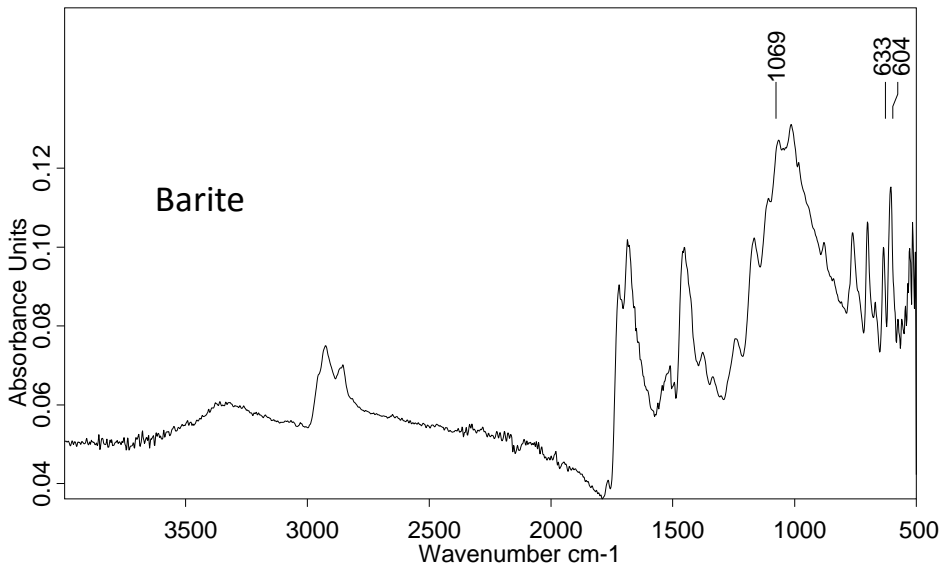
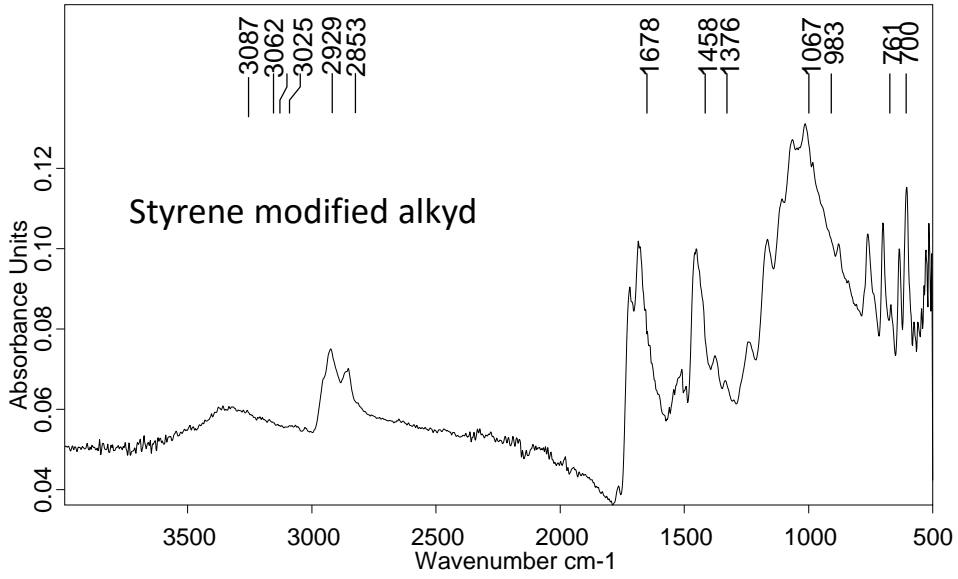
Working conditions:

Attenuated attetotal reflectance (ATR) mode
Num scans acquired: 32 scans
Resolution: 4 cm⁻¹

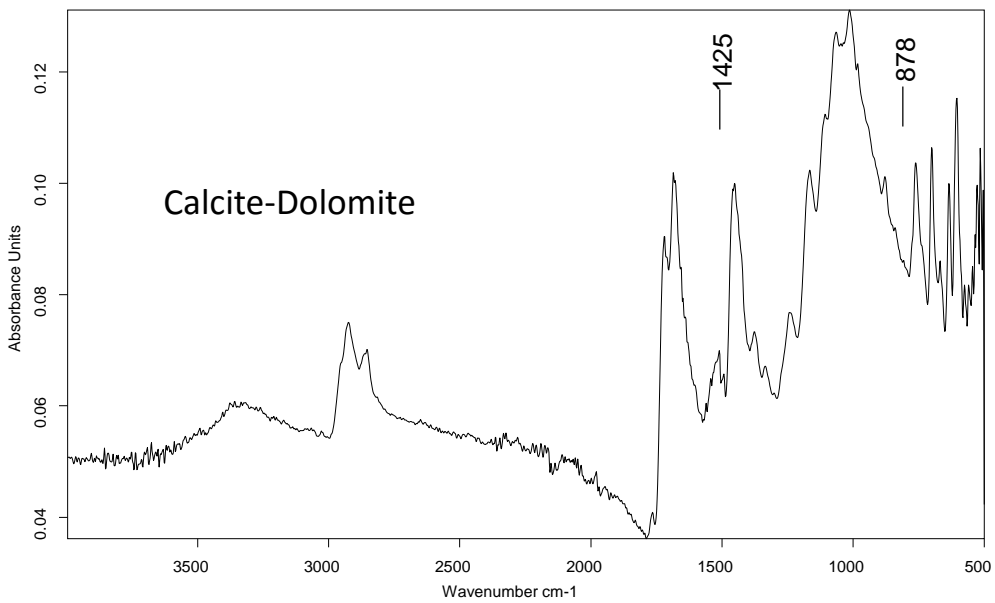
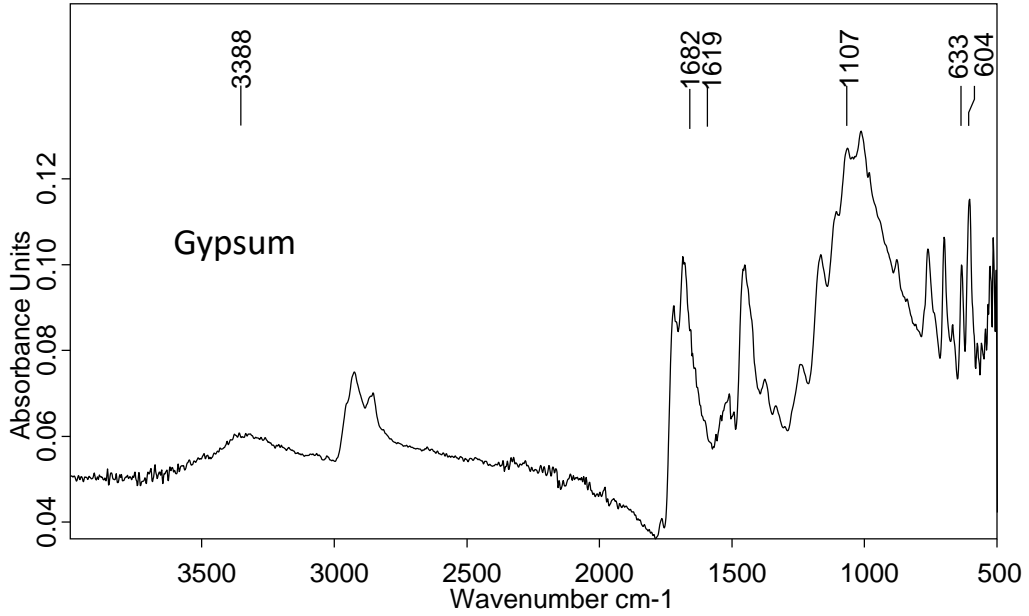
Map of the engine:



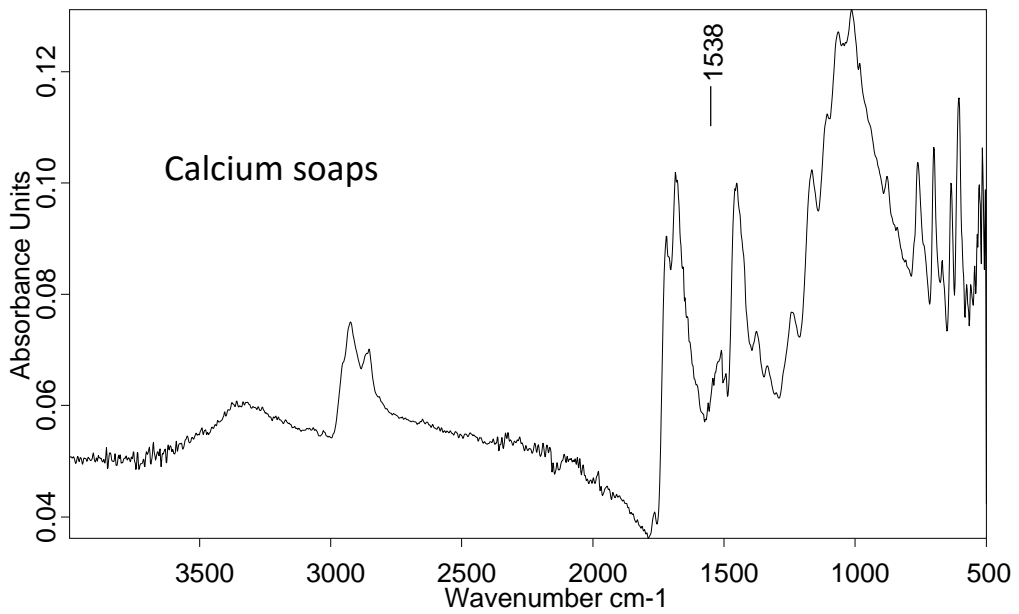
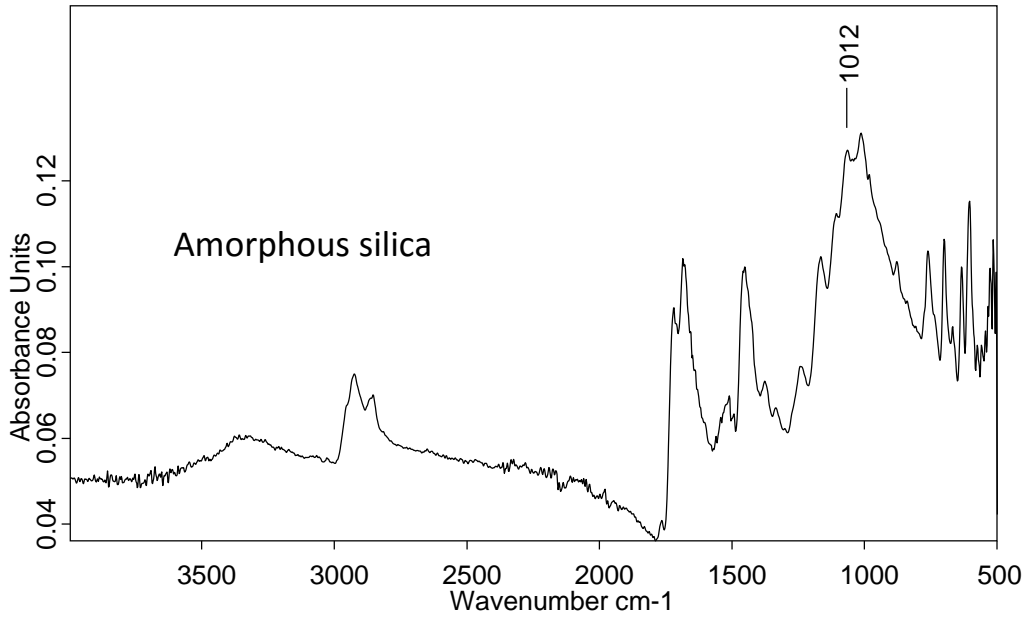
Sample: black paint
Ref: MIK-2
Sampling point: side E



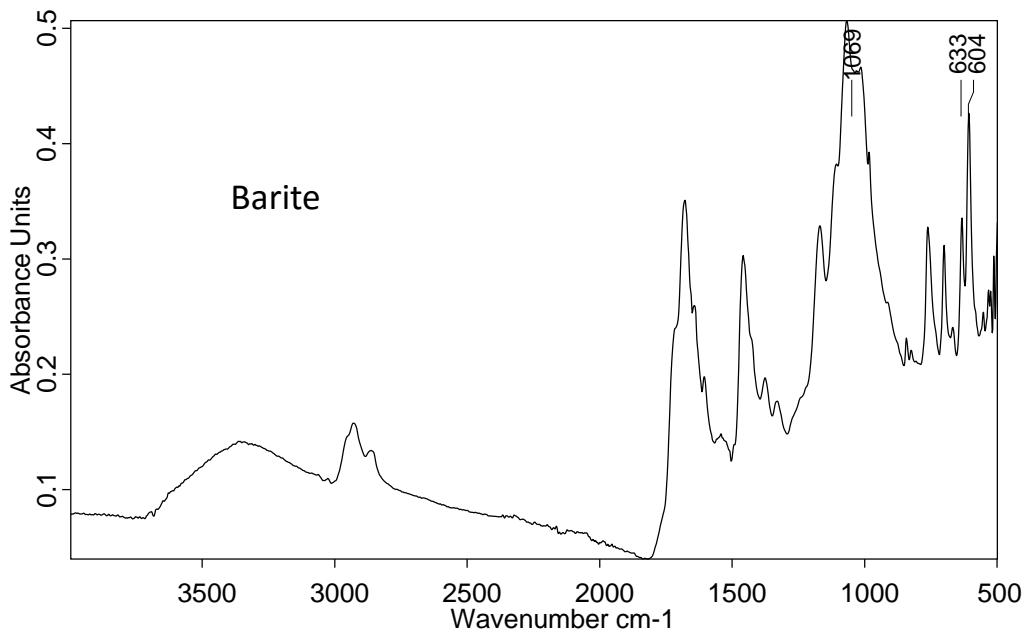
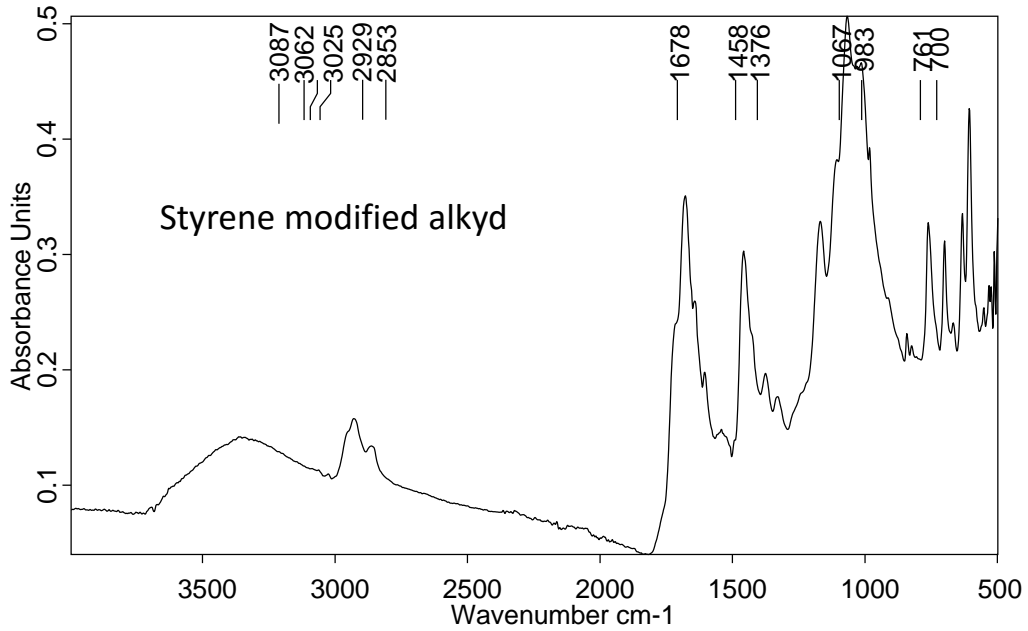
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Ref: MIK-2
Sampling point: side E



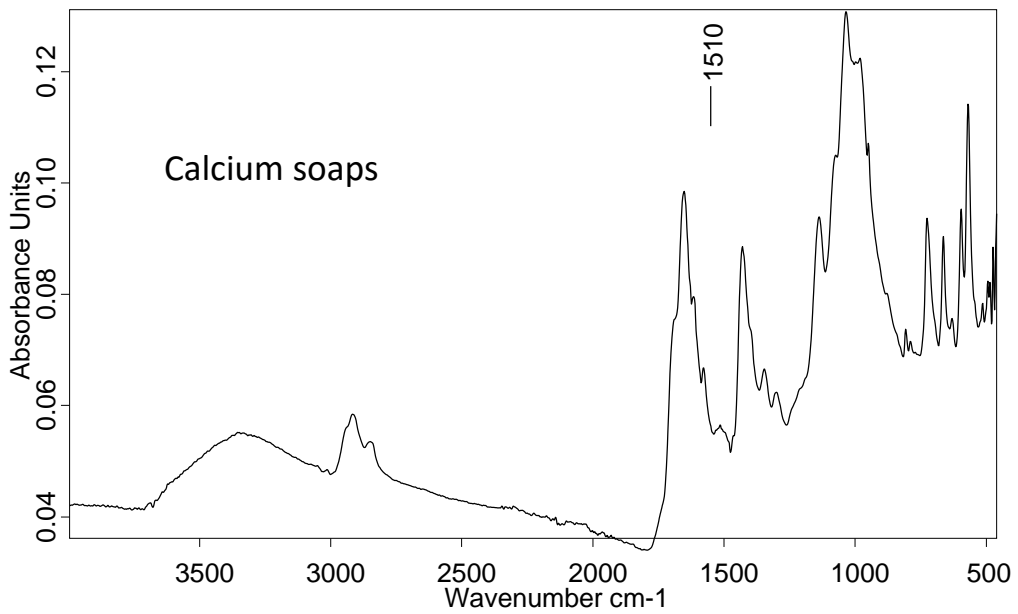
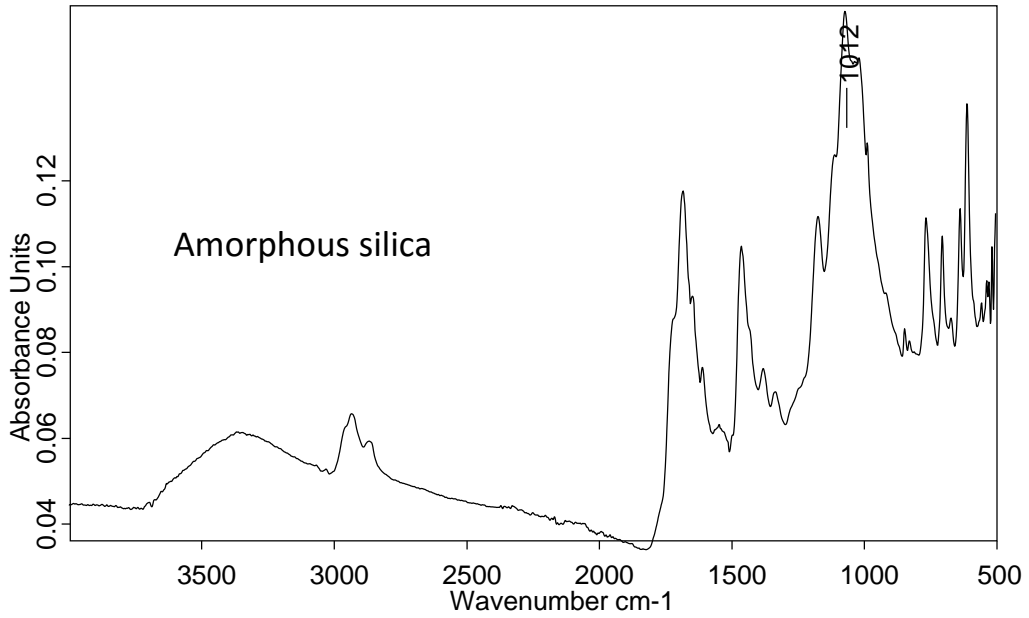
Sample: black paint
Ref: MIK-2
Sampling point: side E



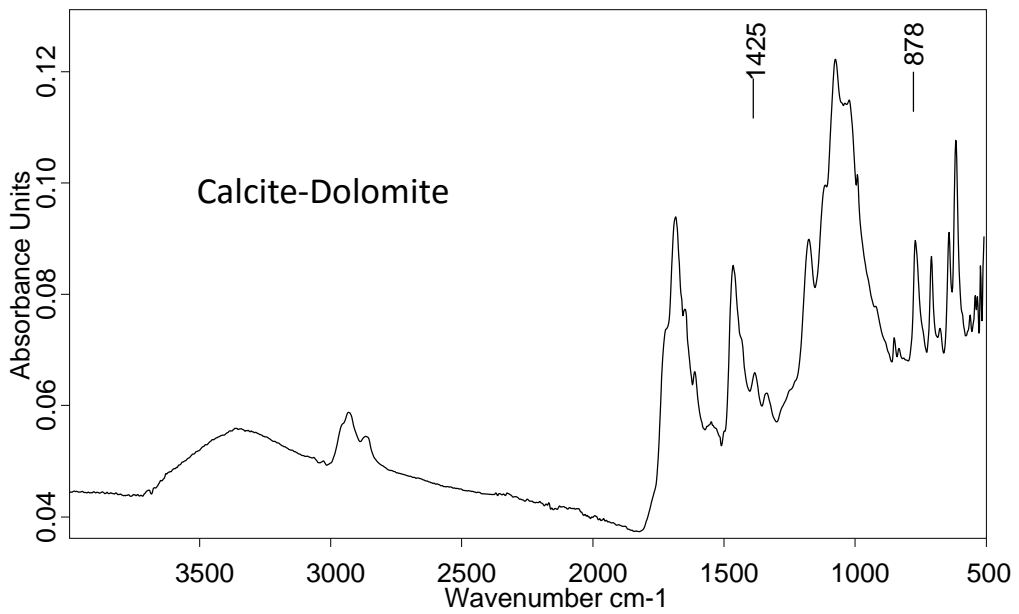
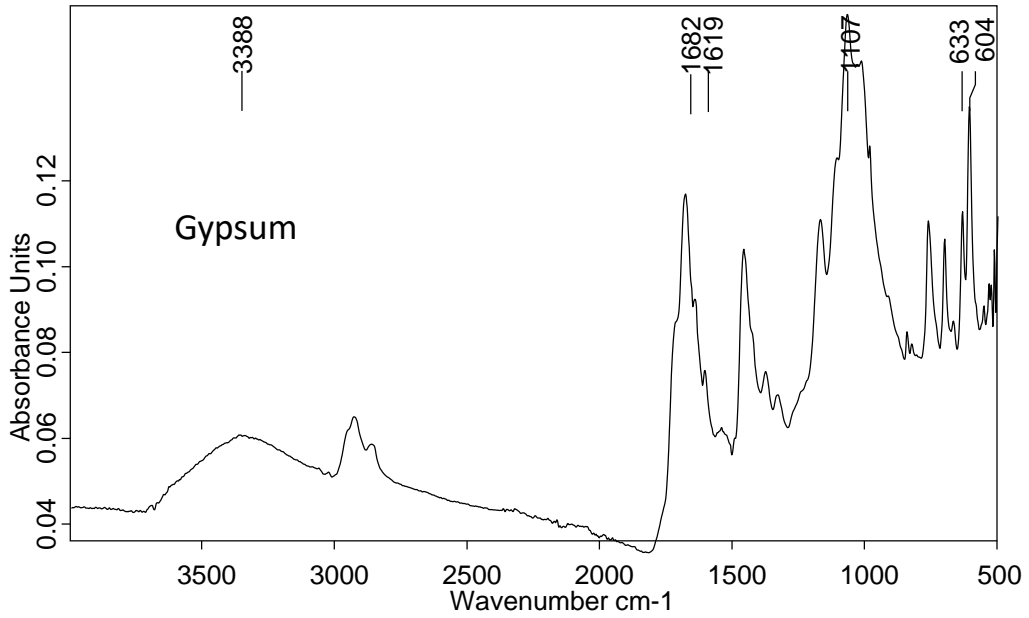
Sample: red paint
Ref: MIK-3
Sampling point: side E



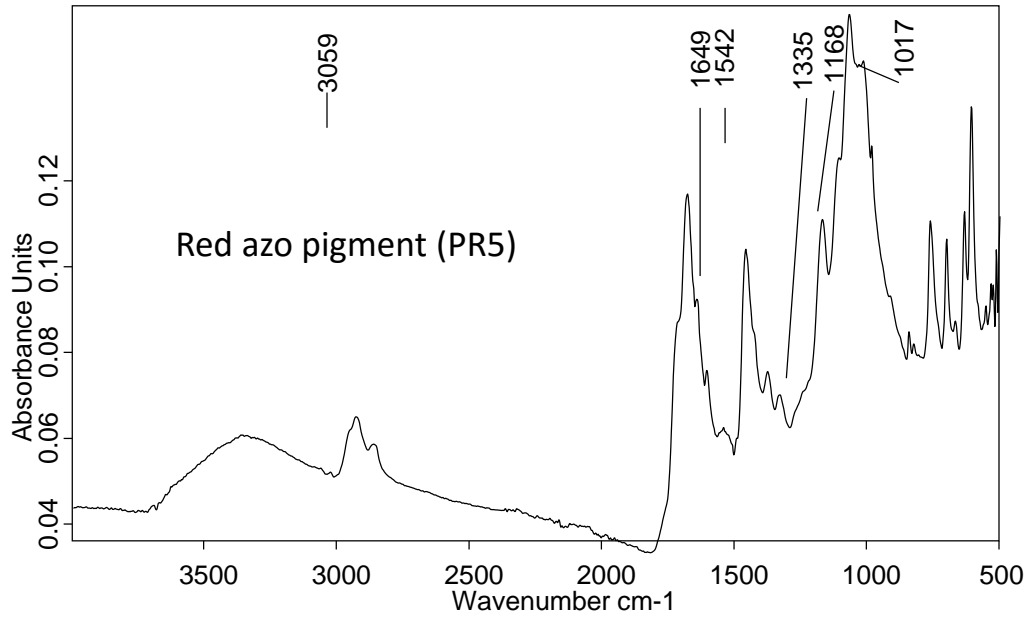
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Sampling point: side E



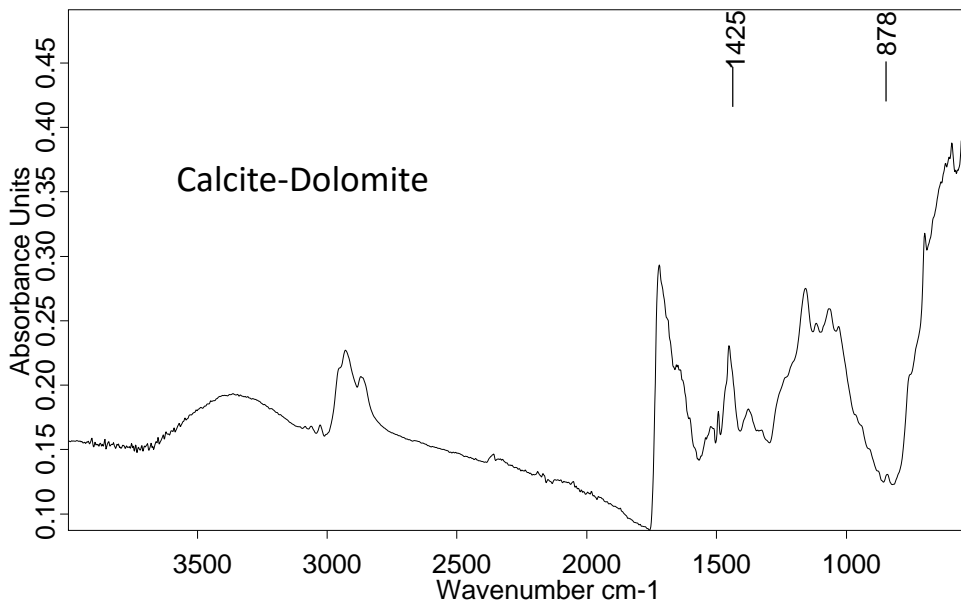
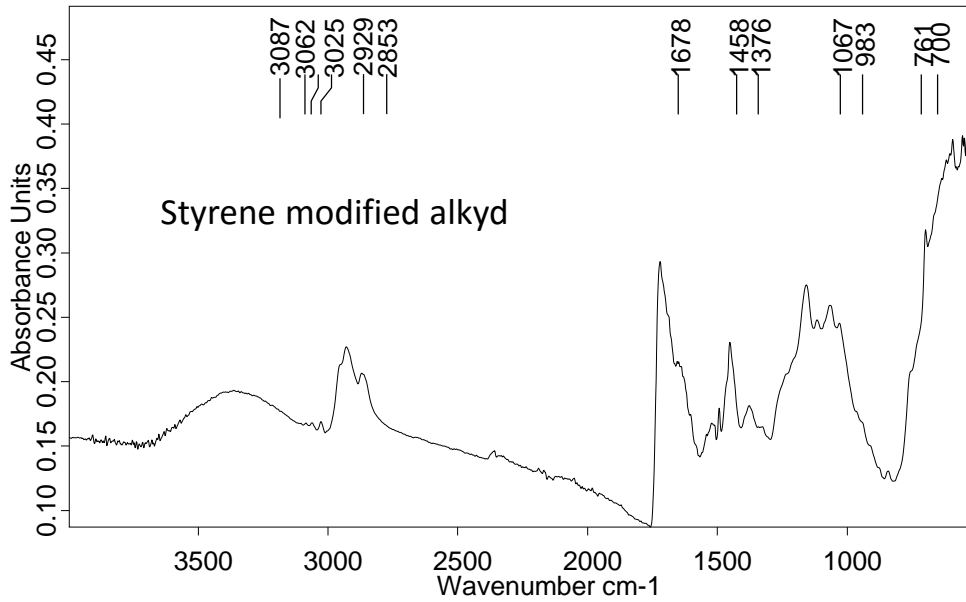
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Ref: MIK-3
Sampling point: side E



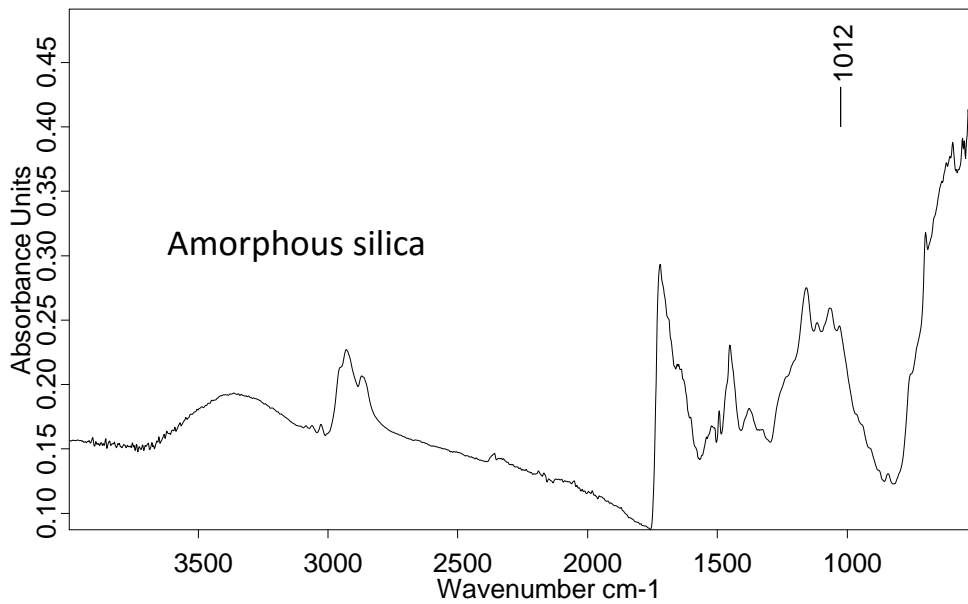
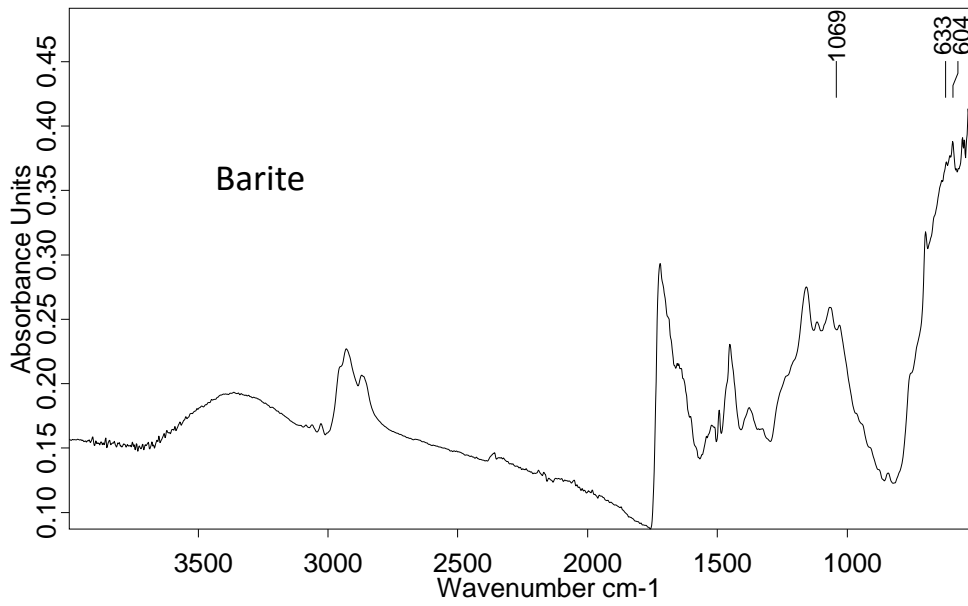
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Sampling point: side E



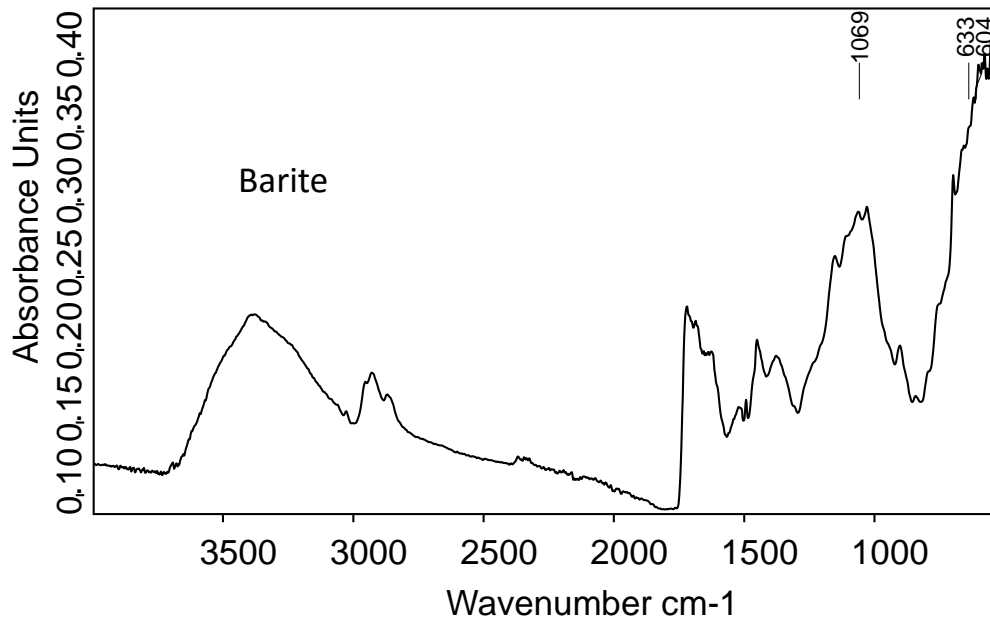
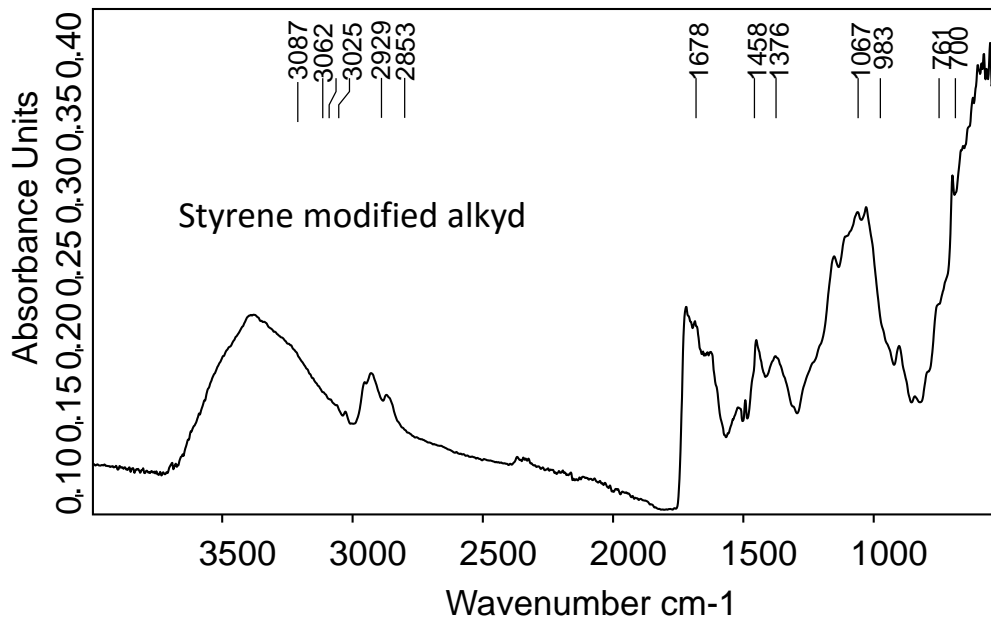
Sample: white paint
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Sampling point: side E



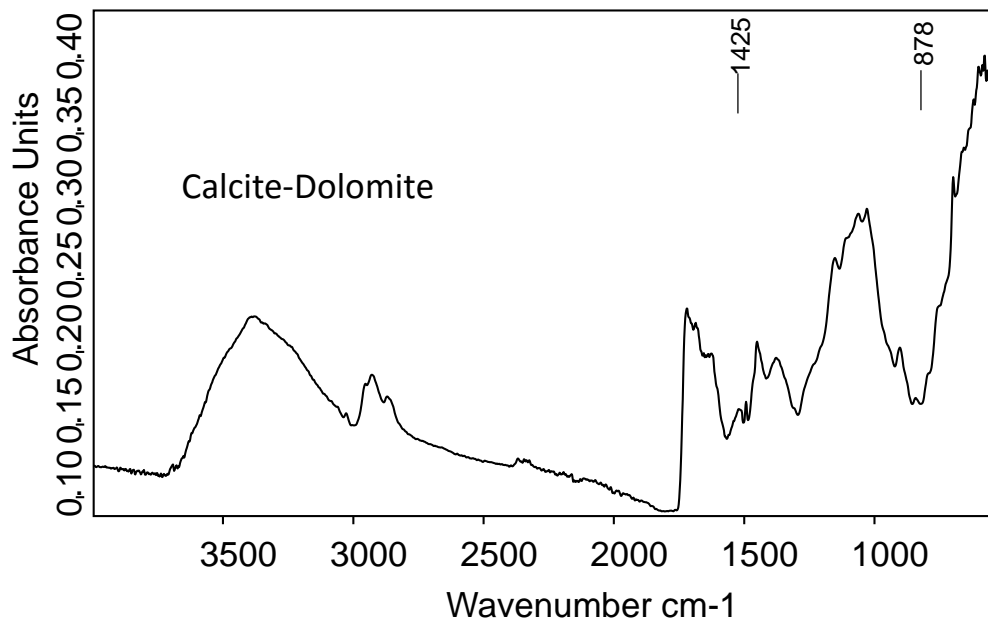
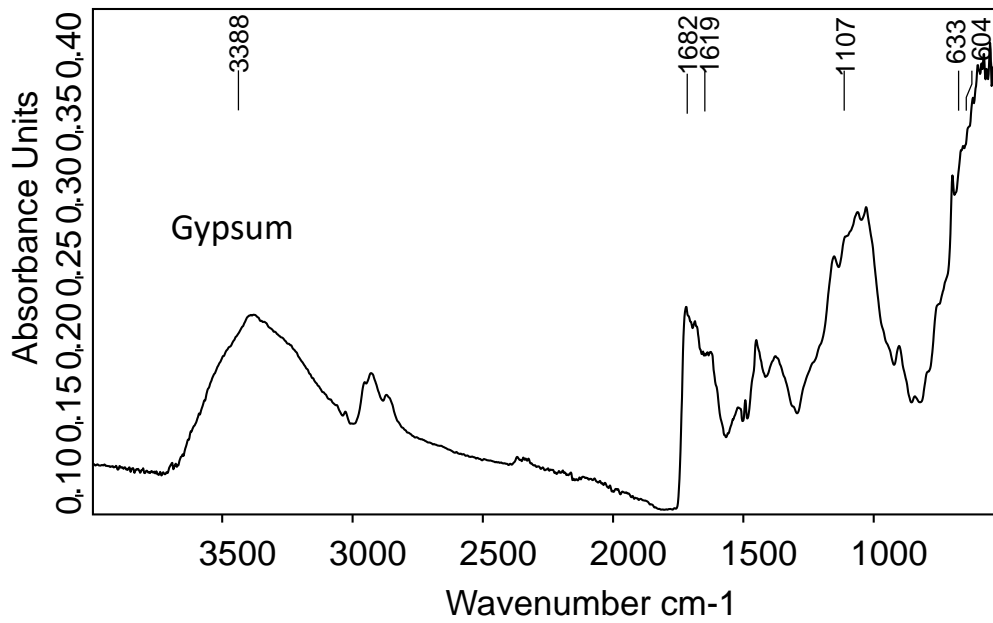
Sample: white paint
Ref: MIK-20
Sampling point: side E



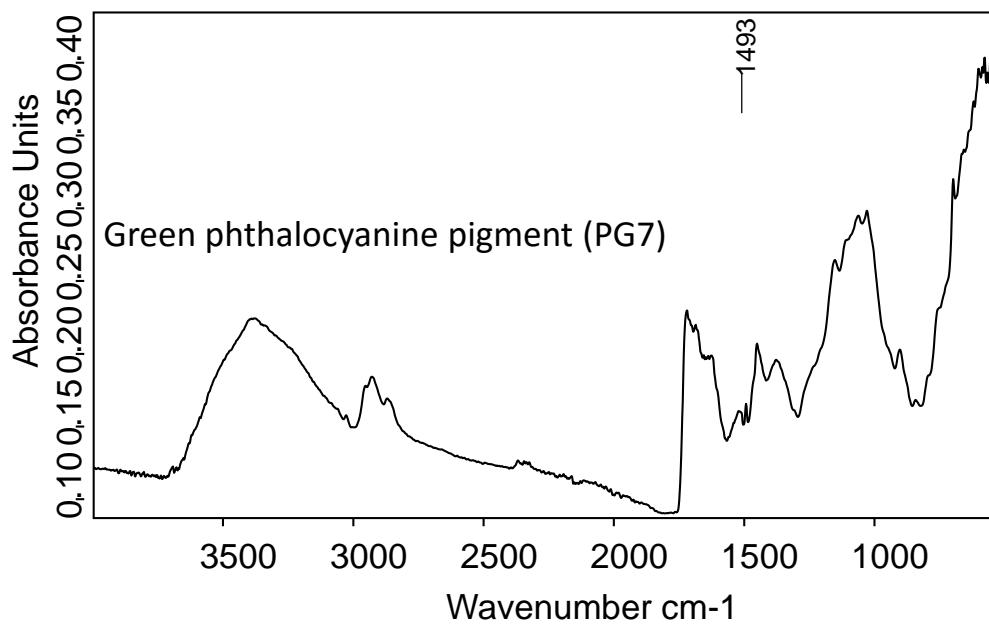
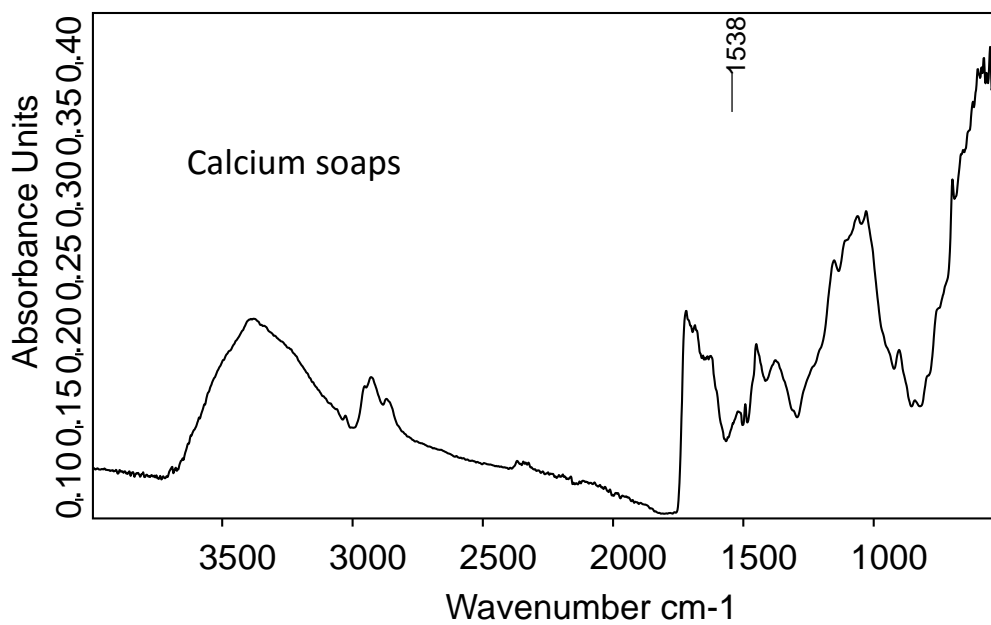
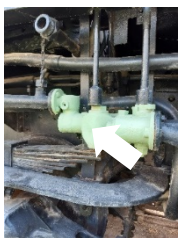
Sample: green paint
Ref: MIK-19
Sampling point: side E



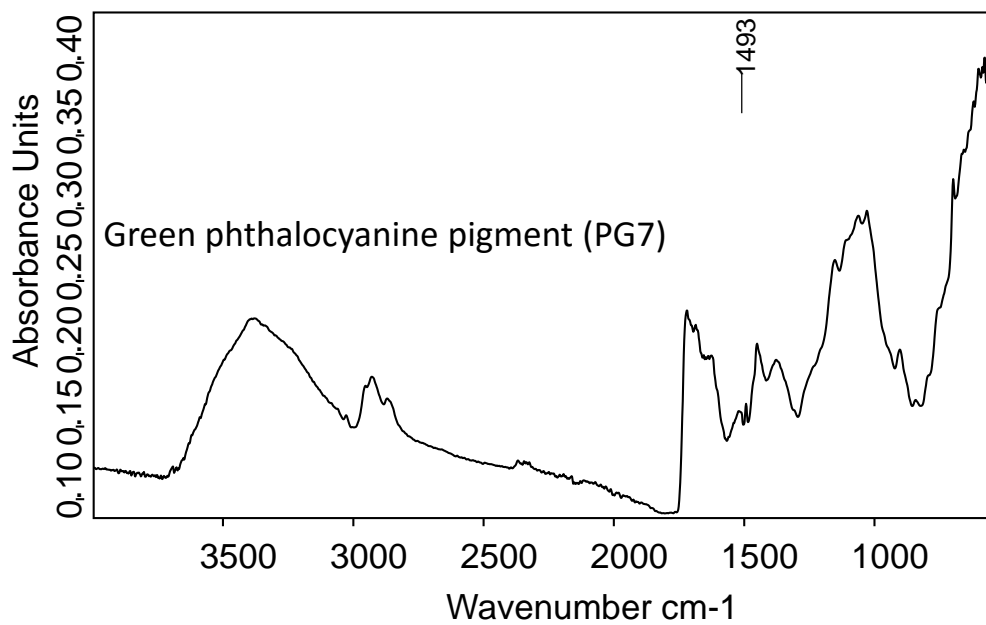
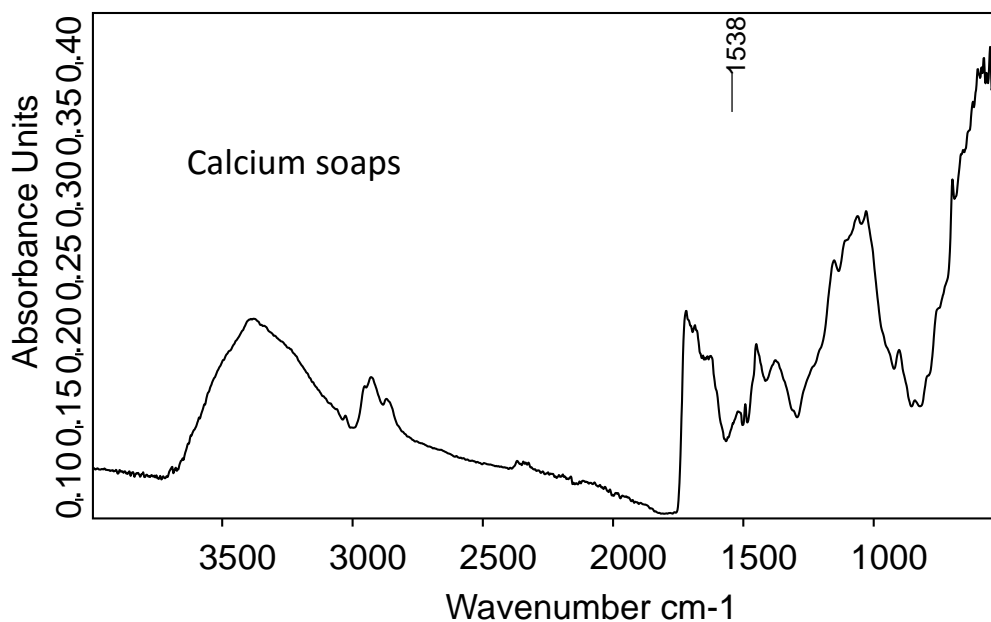
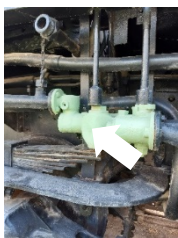
Sample: green paint
Ref: MIK-19
Sampling point: side E



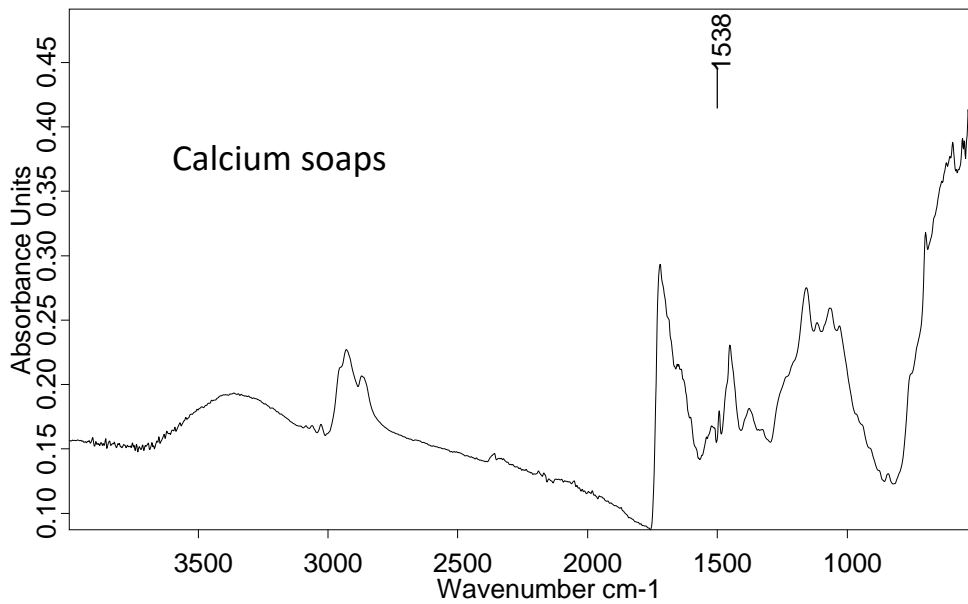
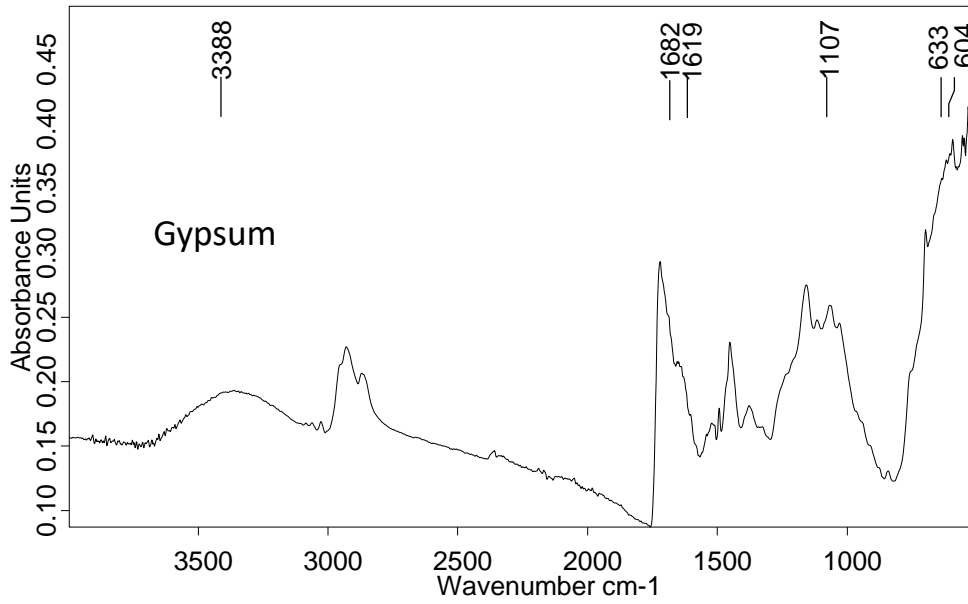
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Ref: MIK-19
Sampling point: side E



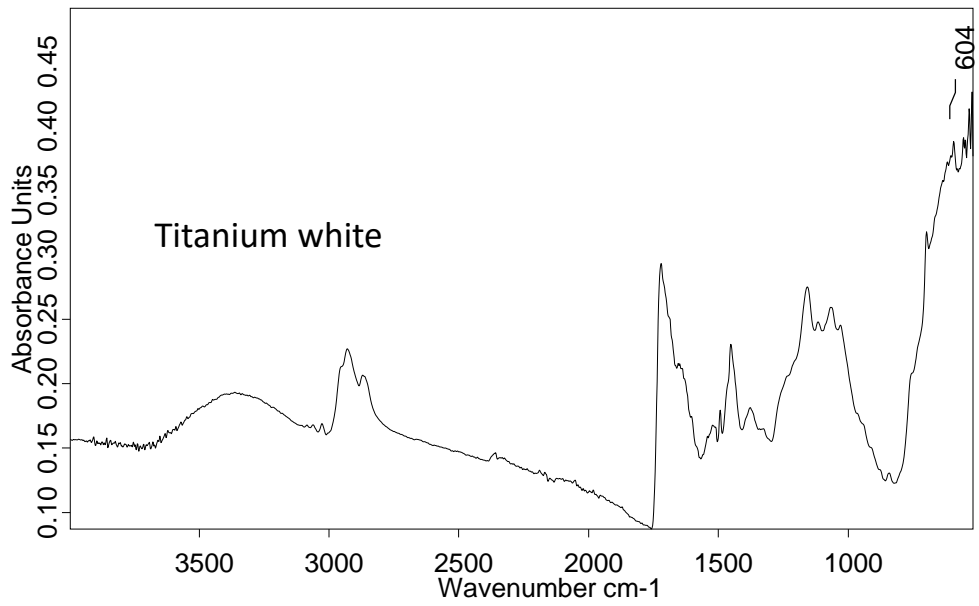
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Ref: MIK-19
Sampling point: side E



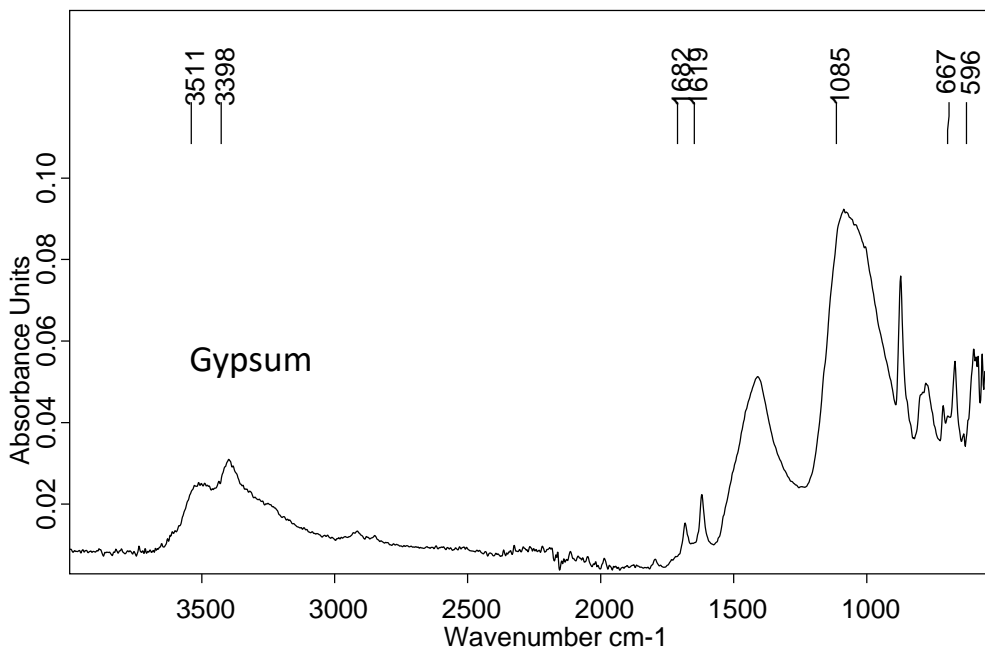
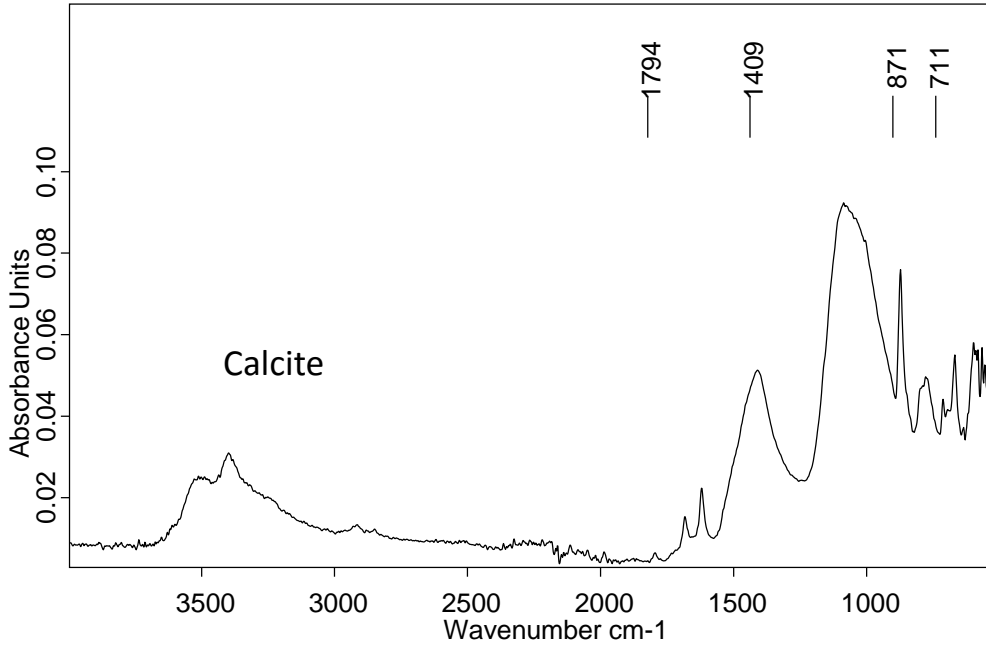
Sample: white paint
Ref: MIK-20
Sampling point: side E



Sample: white paint
Ref: MIK-20
Sampling point: side E



Sample: mineral crusts
Ref: MIK-8
Sampling point: side E



Sample: mineral crusts
Ref: MIK-8
Sampling point: side E

