

Supporting Information

to

Piracetam Co-Crystals with OH-Group functionalized Carboxylic Acids

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1 List of Co-Crystal Formers Tested in the Screening Experiments

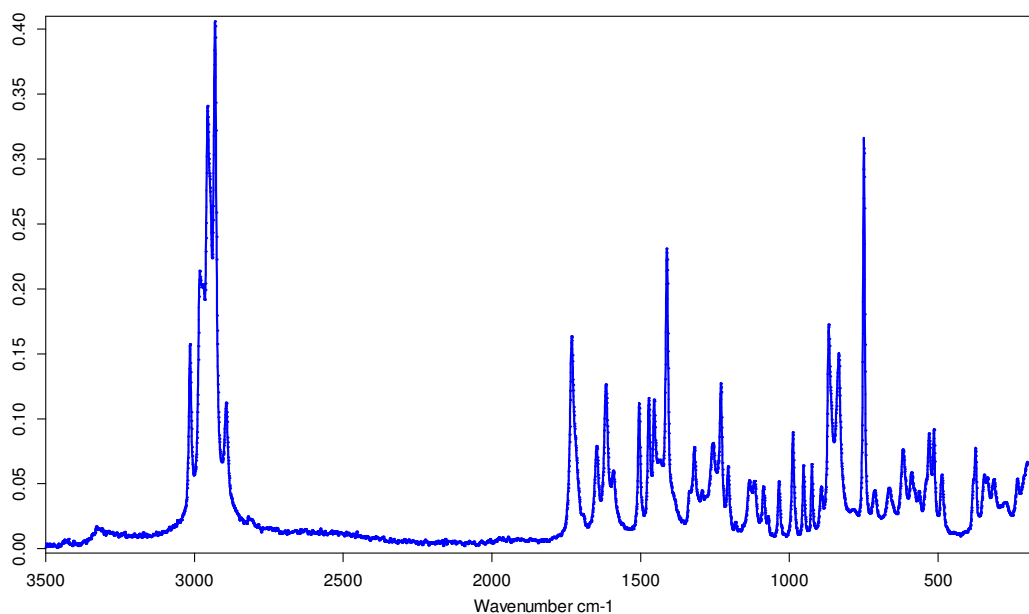
Co-Crystal Former	Functional Group	Solvents Tested	Hit*
4-acetaminobenzoic acid	carboxylic acid, amide	acetone, 2-propanol, acetonitrile, methanol	none
2-amino-5-methylbenzoic acid	carboxylic acid, amine	dichloromethane, DMSO, acetonitrile, methanol	none
L-arginine	carboxylic acid, amine	mixtures of water with 2-propanol, acetonitrile, methanol	none
(+)-camphoric acid	carboxylic acid	acetone, 2-propanol, acetonitrile, methanol	none
citric acid	carboxylic acid, hydroxyl group	water, 1-propanol, acetonitrile, methanol	ev & sd
fumaric acid	carboxylic acid	acetone, 1- and 2-propanol, methanol	none
gentisic acid	carboxylic acid, hydroxyl groups	DMSO, methanol, water	ev & sd
D-glucuronic acid	carboxylic acid, hydroxyl groups	methanol, mixtures of water with acetonitrile, methanol, 2-propanol	none
glutaric acid	carboxylic acid	water, 2-propanol, CH ₂ Cl ₂ , methanol	none
glycine	carboxylic acid, amine	mixtures of water with 2-propanol, DMSO, methanol	none
hippuric acid	carboxylic acid, amide	2-propanol, acetonitrile, methanol, water/2-propanol mixture	none
imidazole	secondary amine, secondary imine	2-propanol, acetonitrile, methanol, water/2-propanol mixture	none
D,L-mandelic acid	carboxylic acid, hydroxyl groups	acetone, 2-propanol, acetonitrile, water	sd
maleic acid	carboxylic acid	acetone, 2-propanol, acetonitrile, water	none
mannitol	hydroxyl groups	DMSO, water, water/acetonitrile and water/2-propanol	none
methyl-4-hydroxybenzoate	hydroxyl group, ester	DMSO, CH ₂ Cl ₂ , acetonitrile, methanol	none
piperazine	secondary amine	DMSO, water, acetonitrile, 2-propanol	none
L-proline	carboxylic acid, secondary amine	water, ethanol, methanol, water/2-propanol	none

saccharin	amide	acetonitrile, 2-propanol, methanol, CH ₂ Cl ₂	none
succinic acid	carboxylic acid	DMSO, acetonitrile, methanol	none
L-tartaric acid	carboxylic acid, hydroxyl group	acetone, water, acetonitrile, methanol	ev & sd
urea	di-amide	DMSO, 2-propanol, water, methanol	none

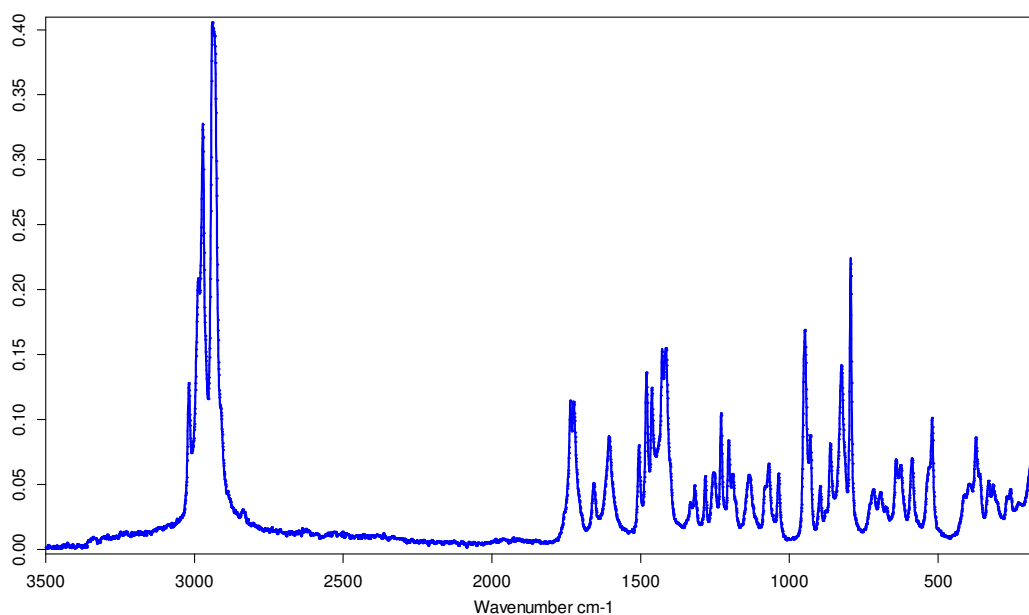
* ev: evaporation screening experiment in microtiter plate, sd: solvent drop grinding experiment

2 FT-Raman Spectra

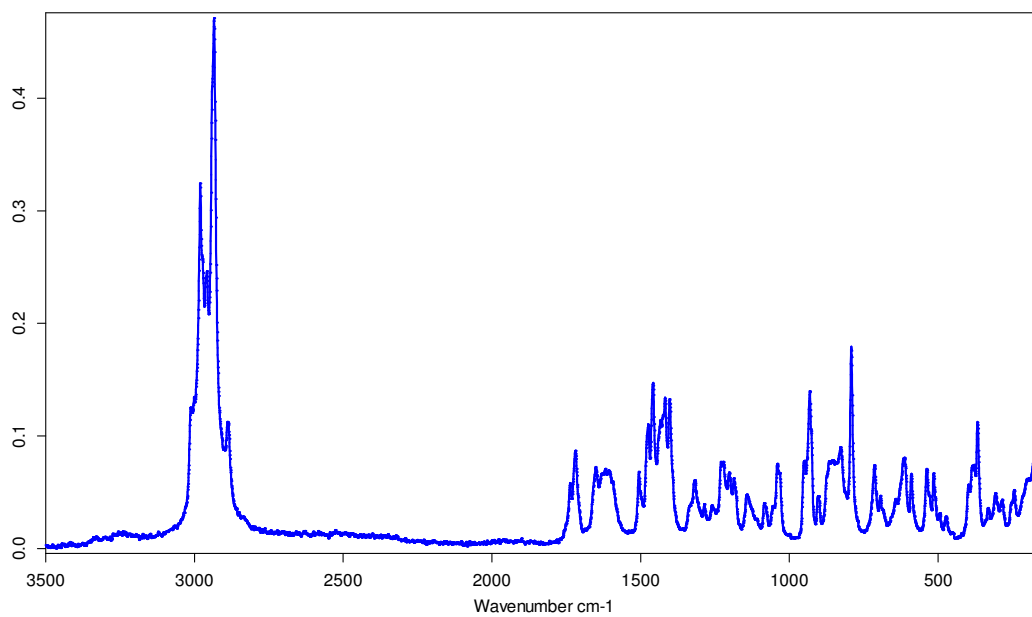
PLT



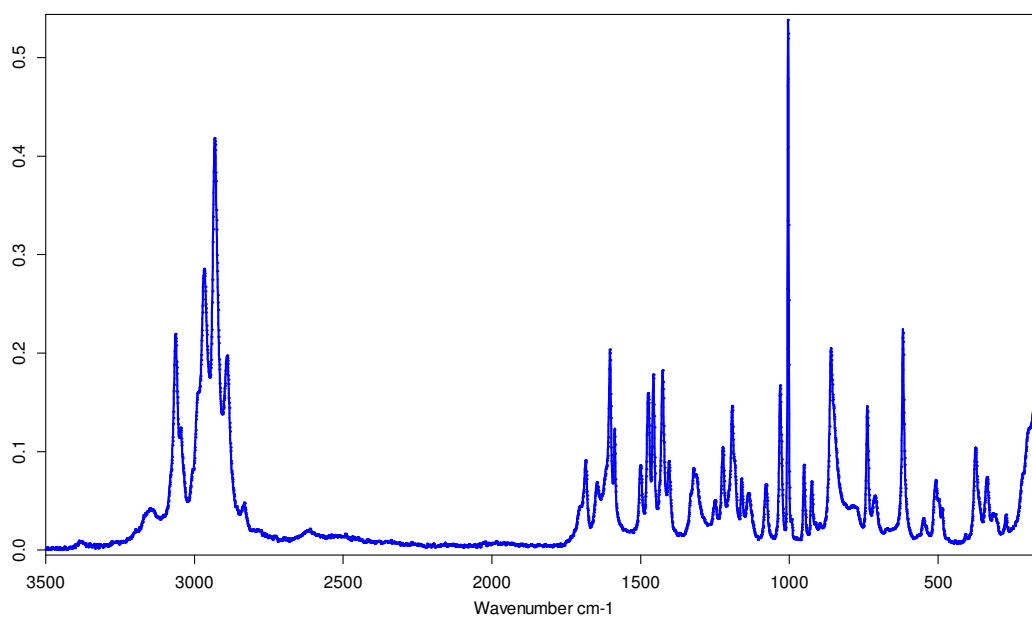
PCI-1



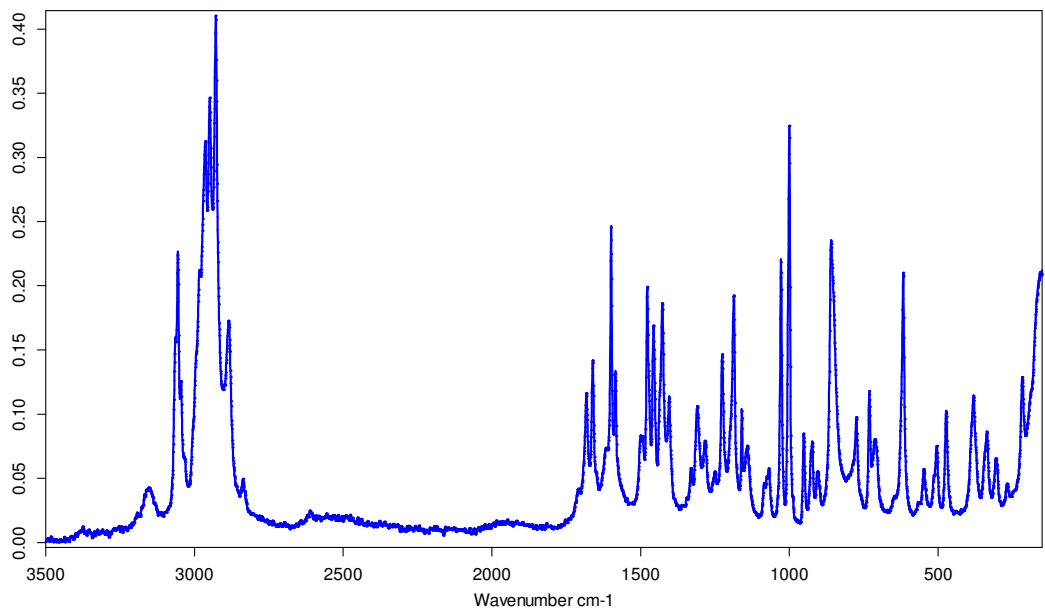
PCI-2



PMA

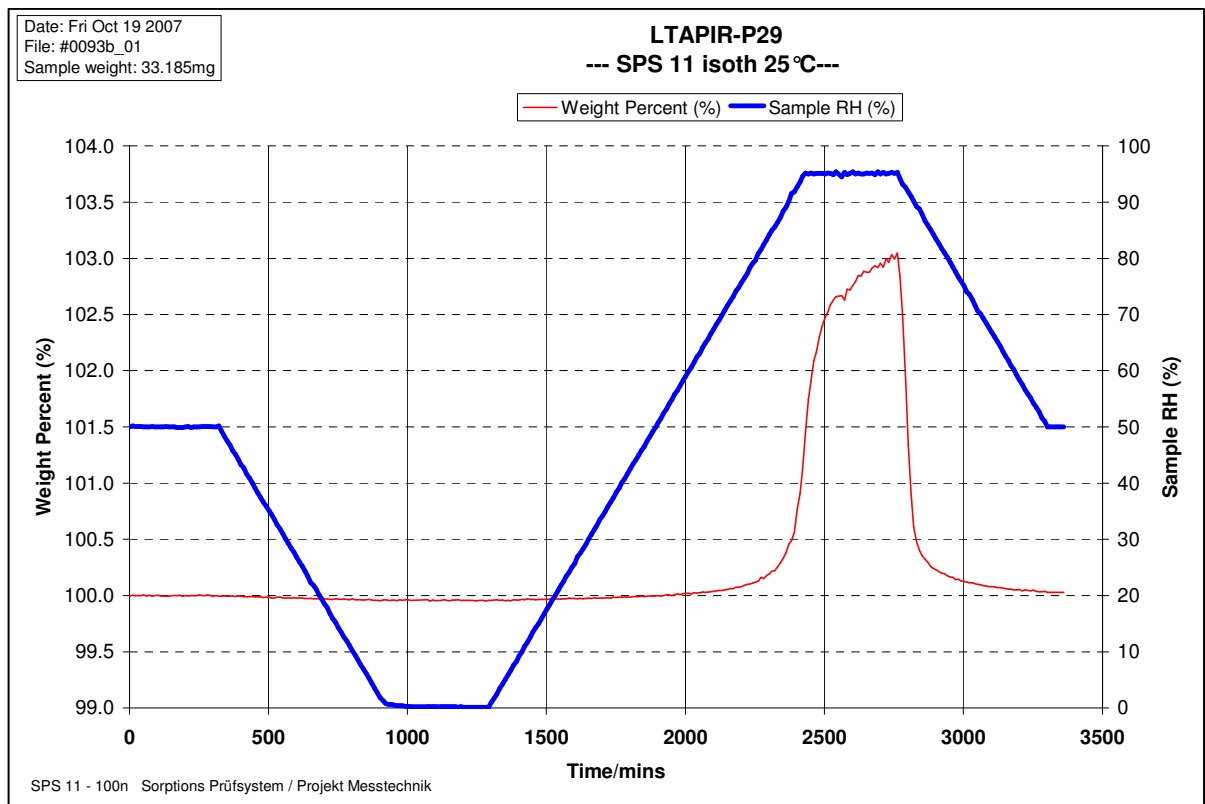


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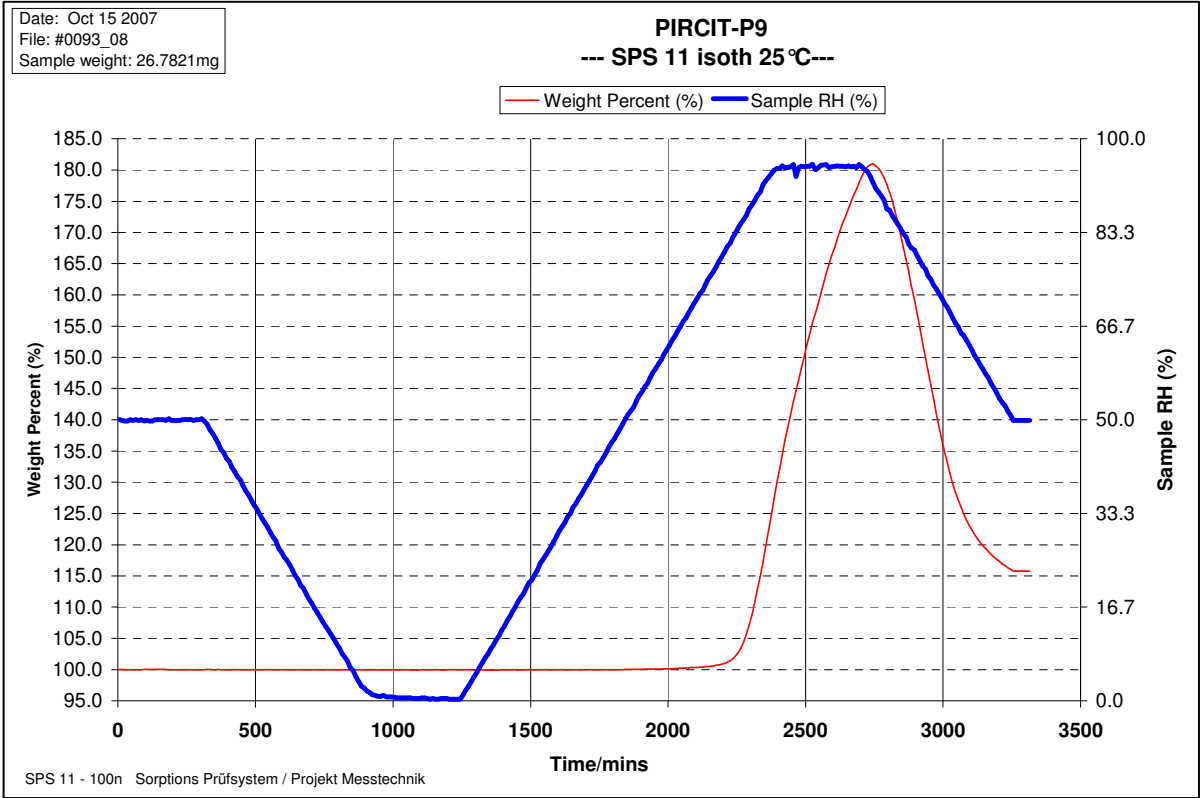


3 Dynamic Vapor Sorption

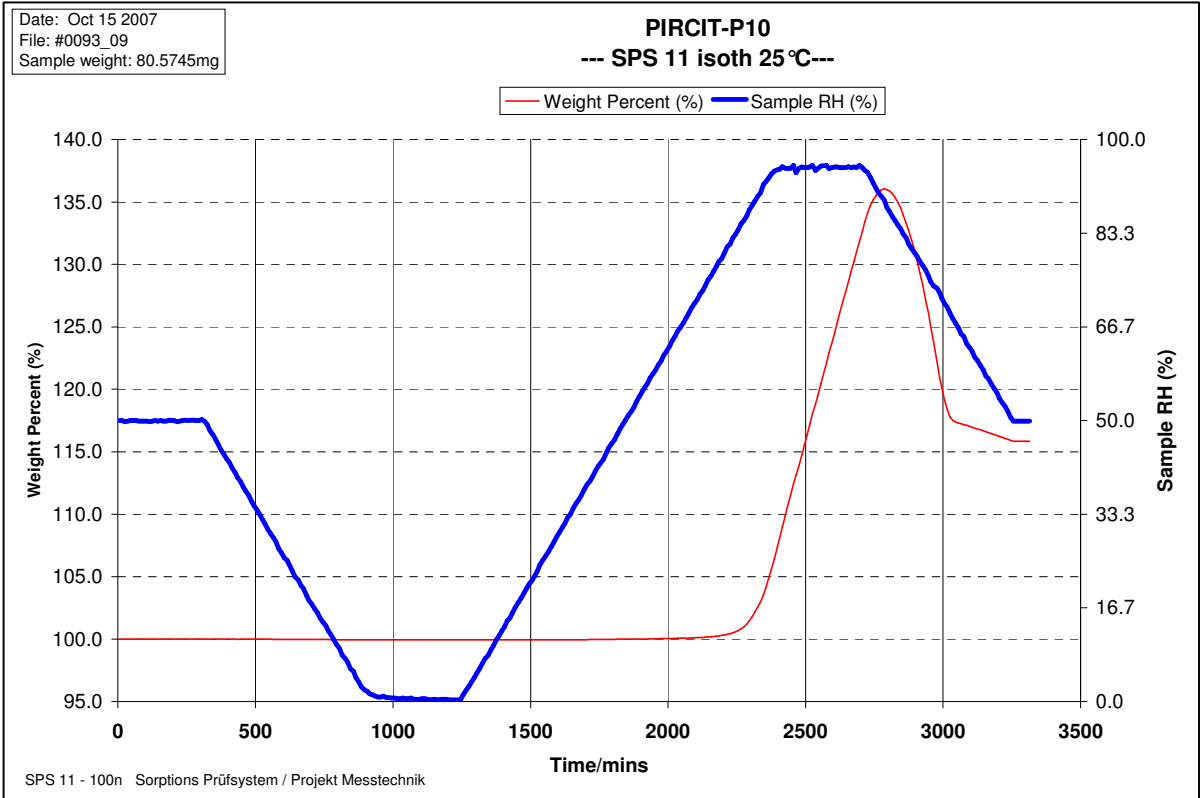
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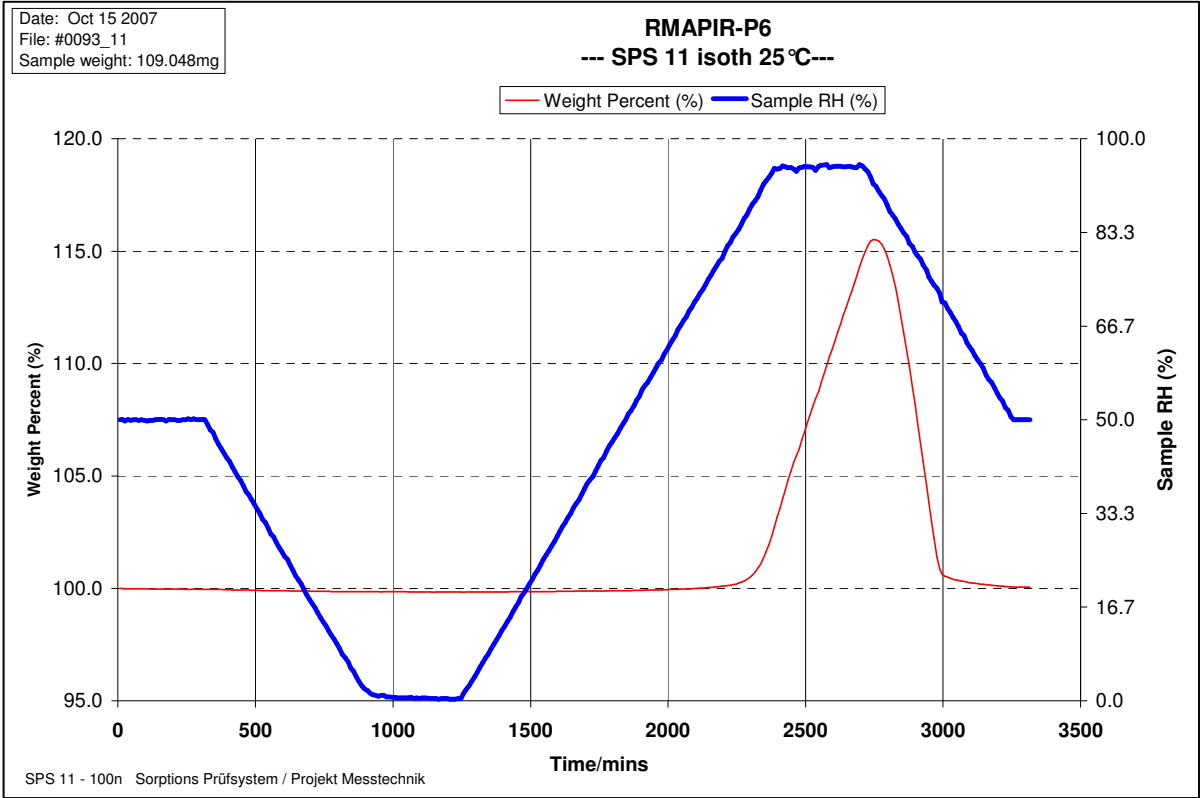
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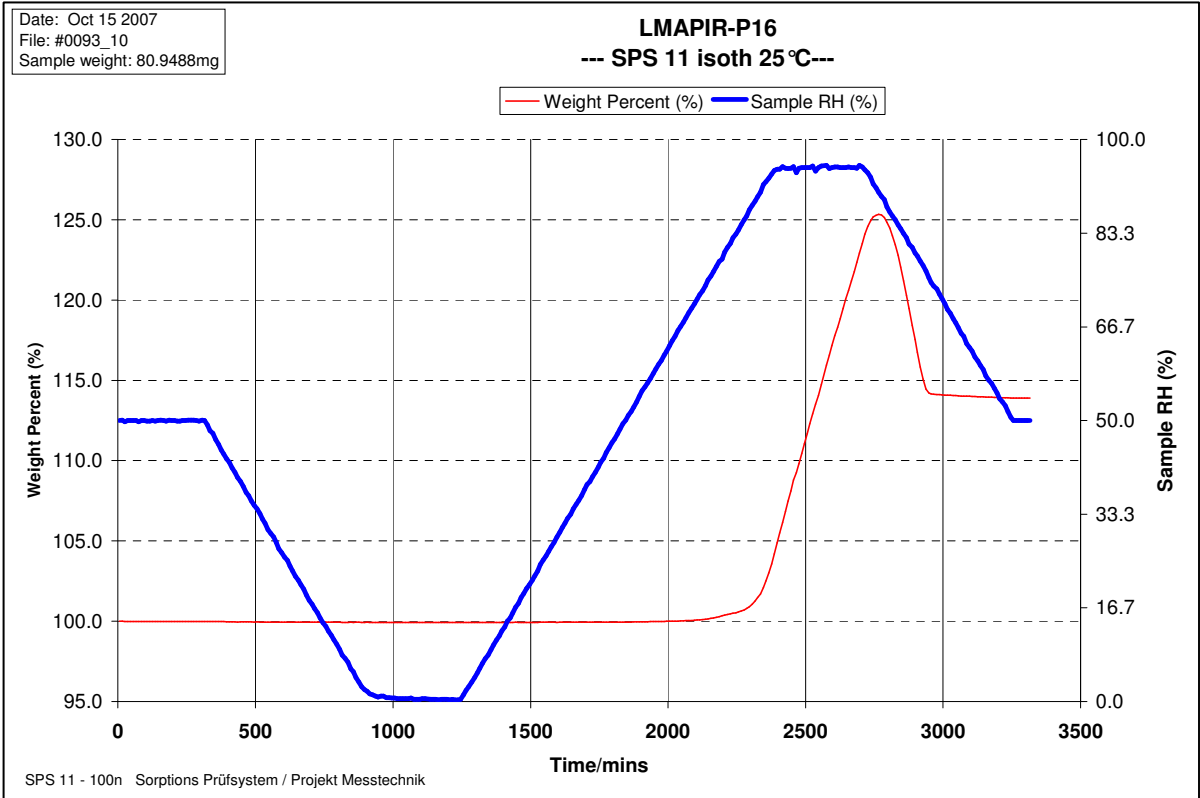
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PMA

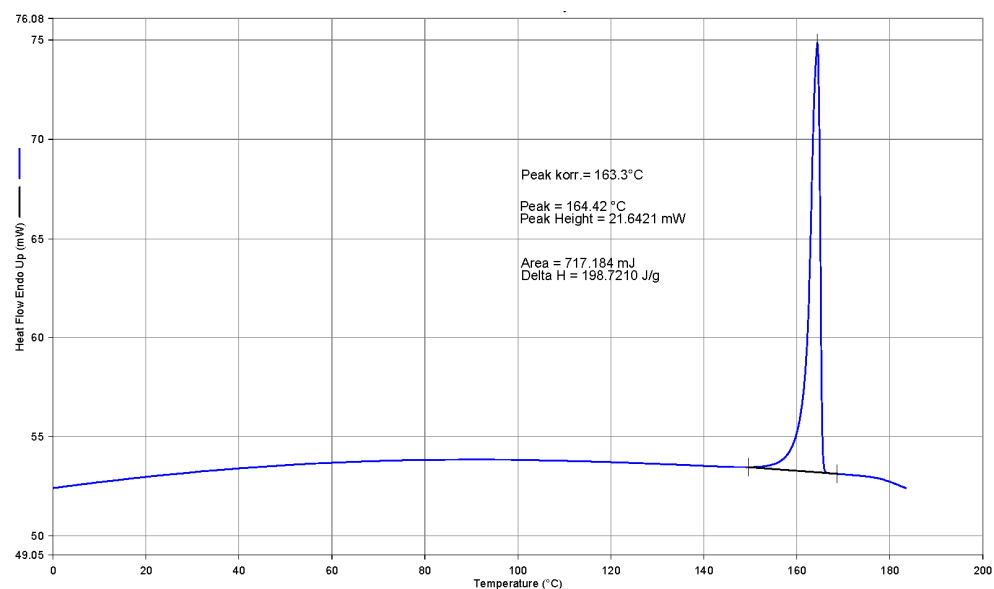


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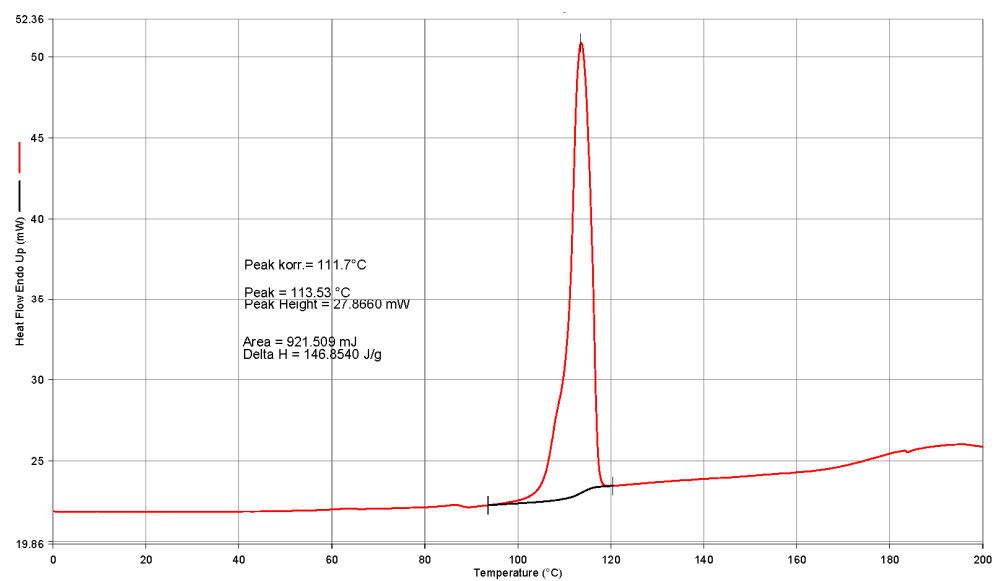


4 DSC

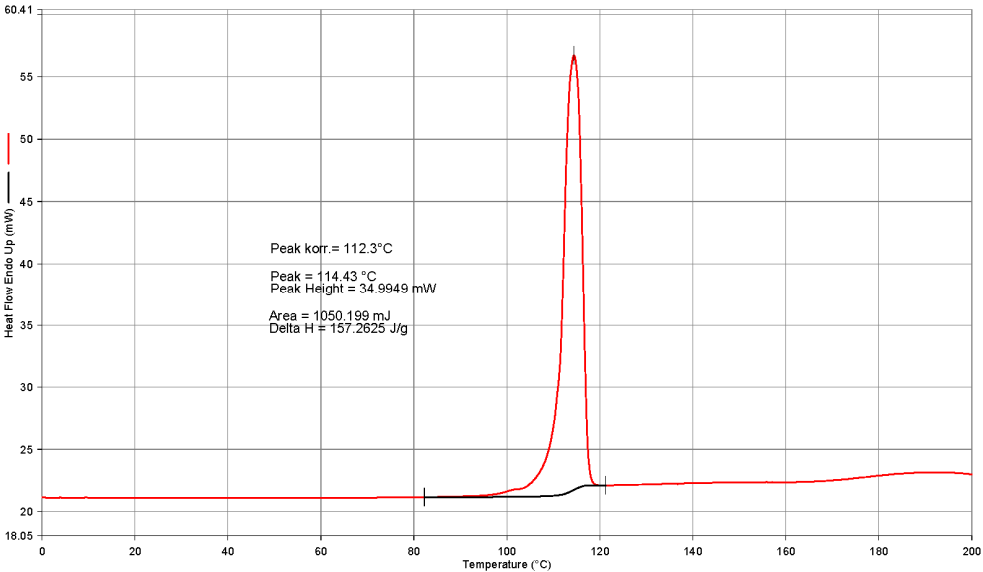
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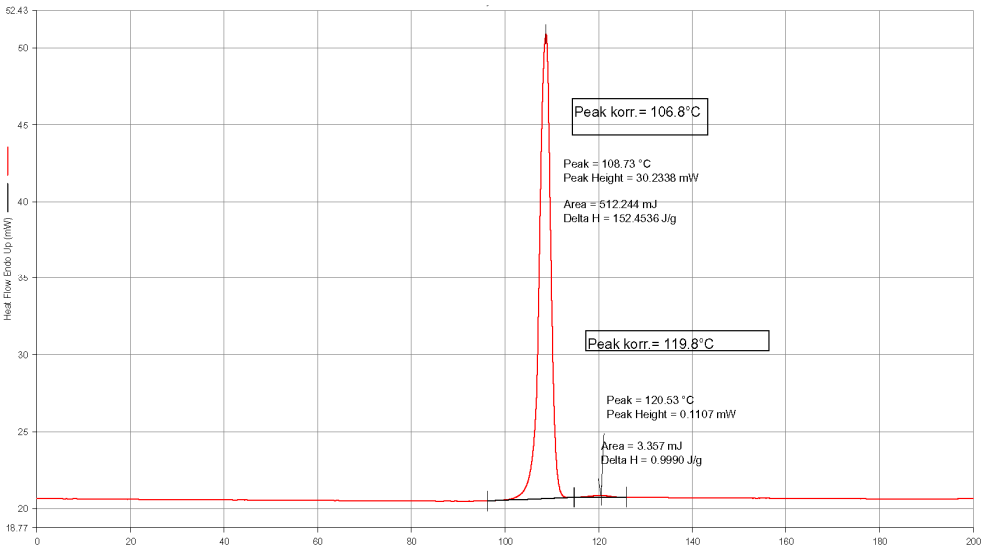
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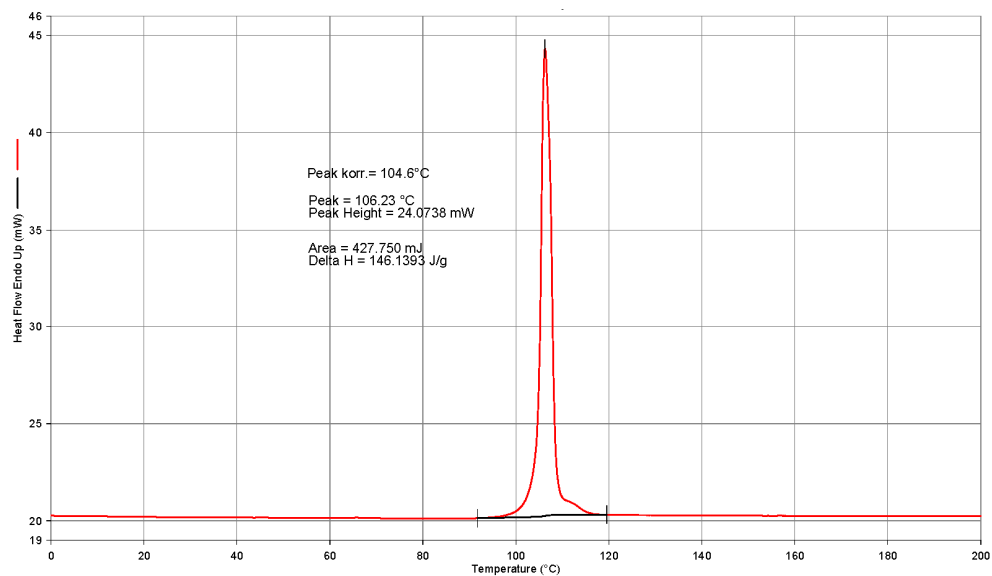
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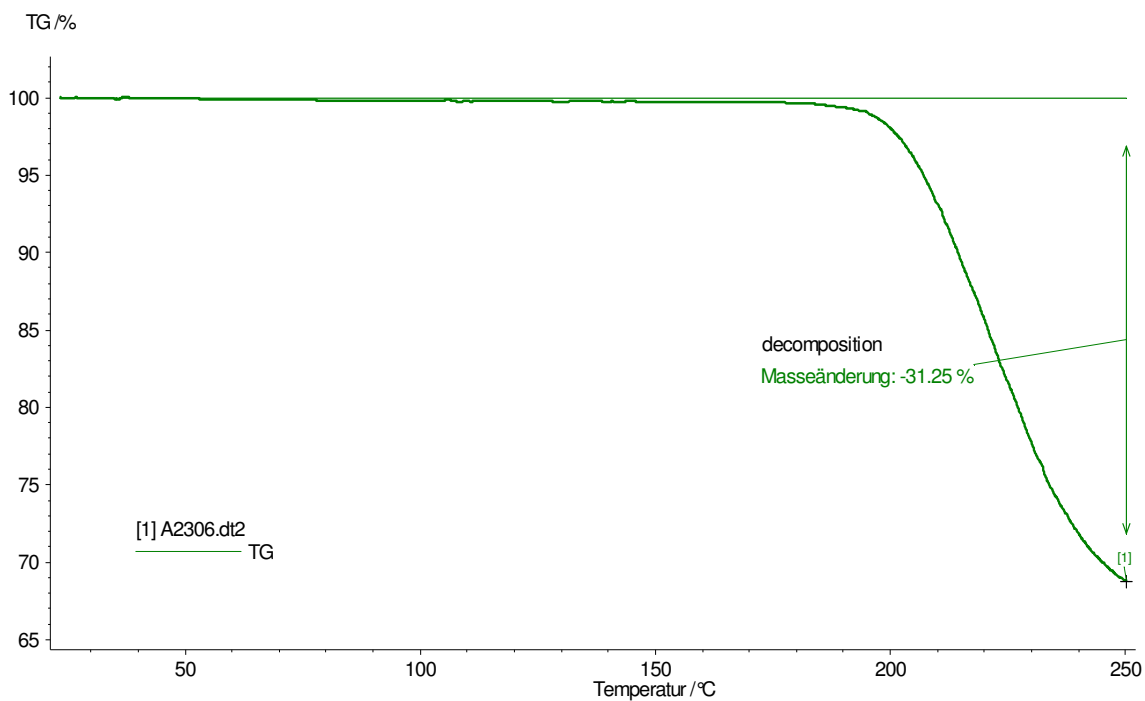


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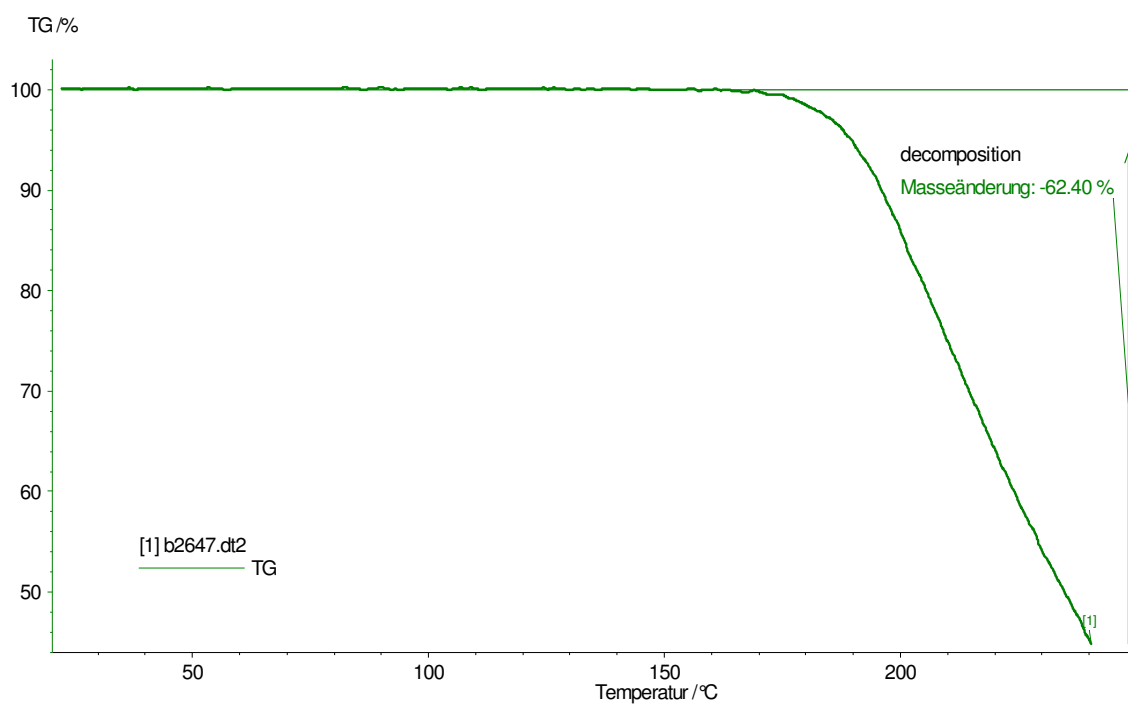


5 TG-FTIR

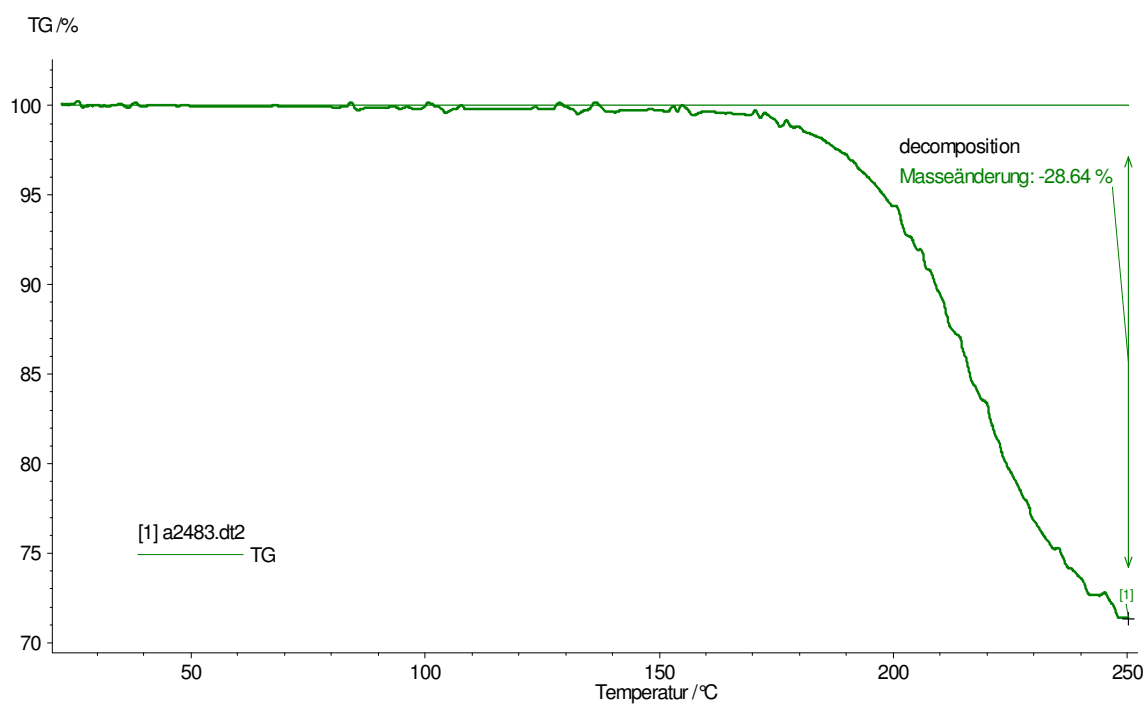
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PCI-1

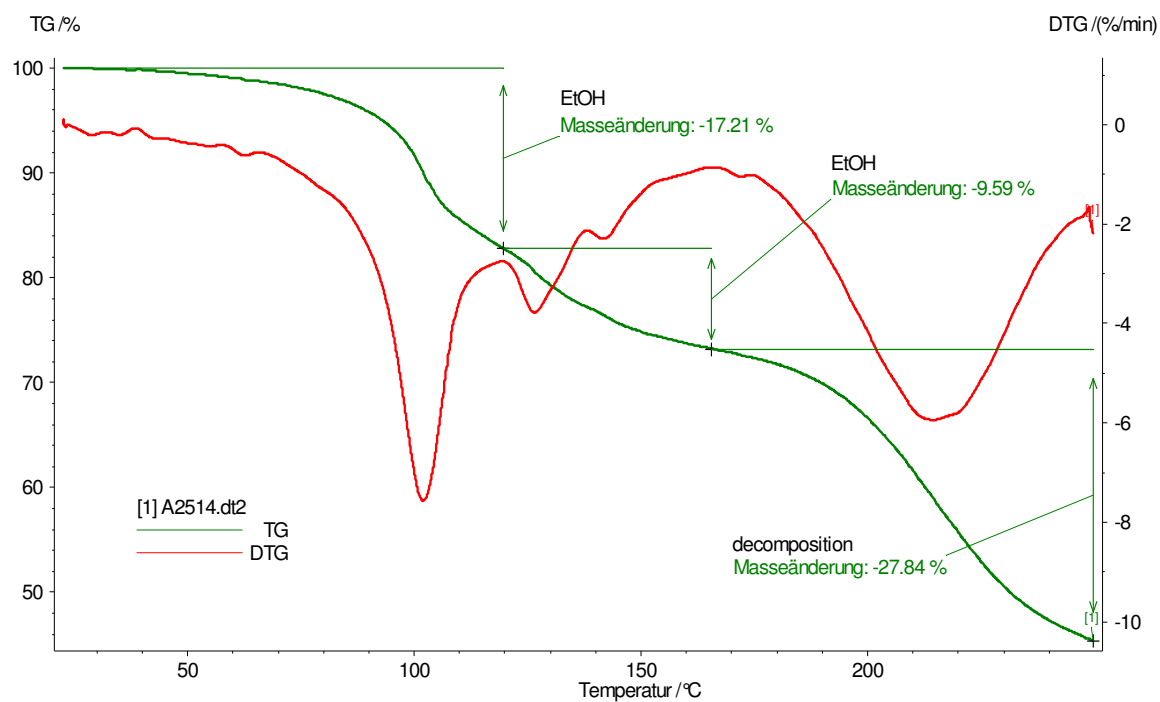


PCI-2

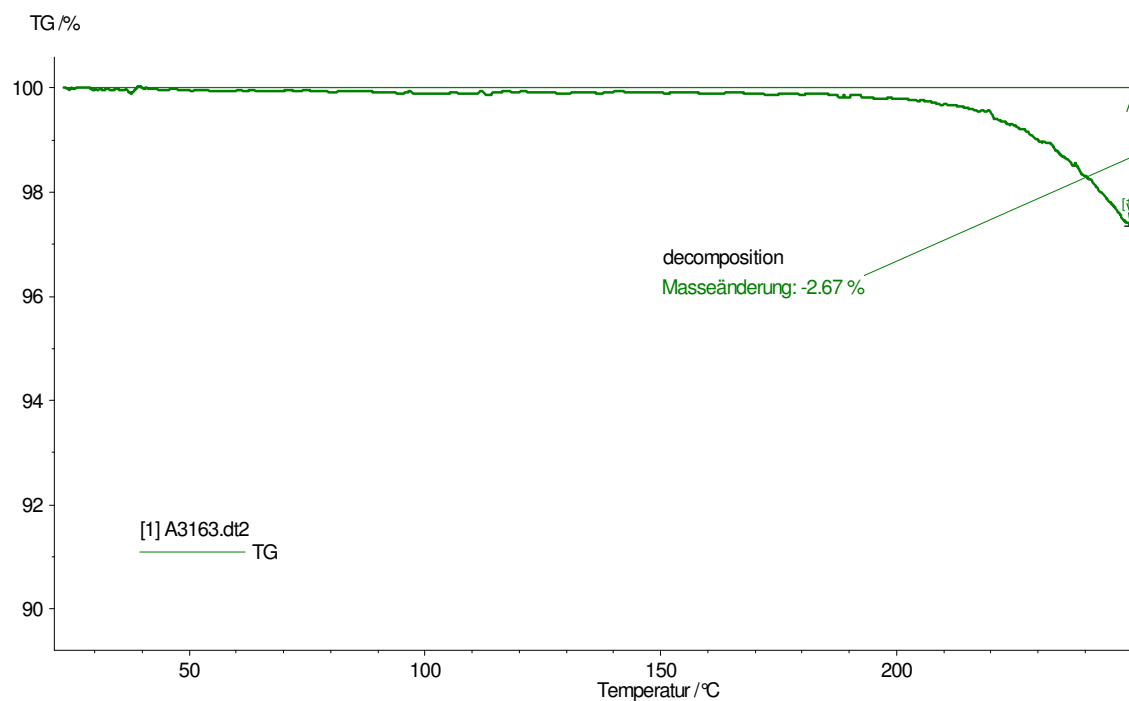


PCI-EtOH

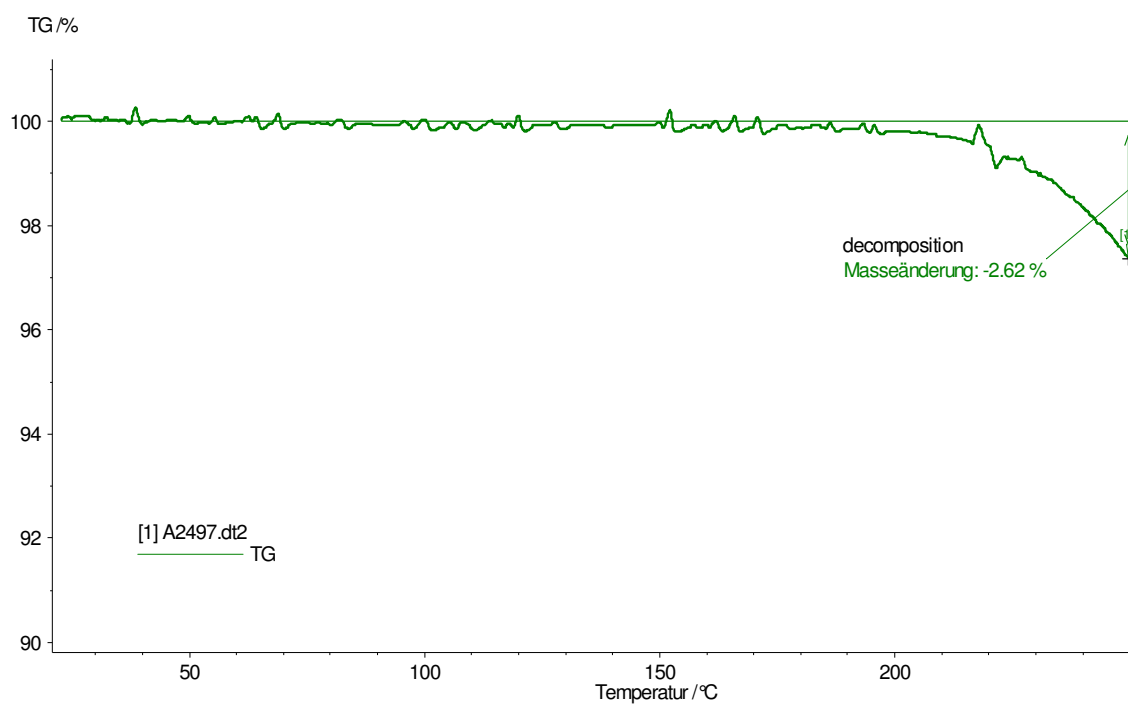
TG-FTIR performed on a slightly dried sample, first step is attributed to rest solvent.



PMA

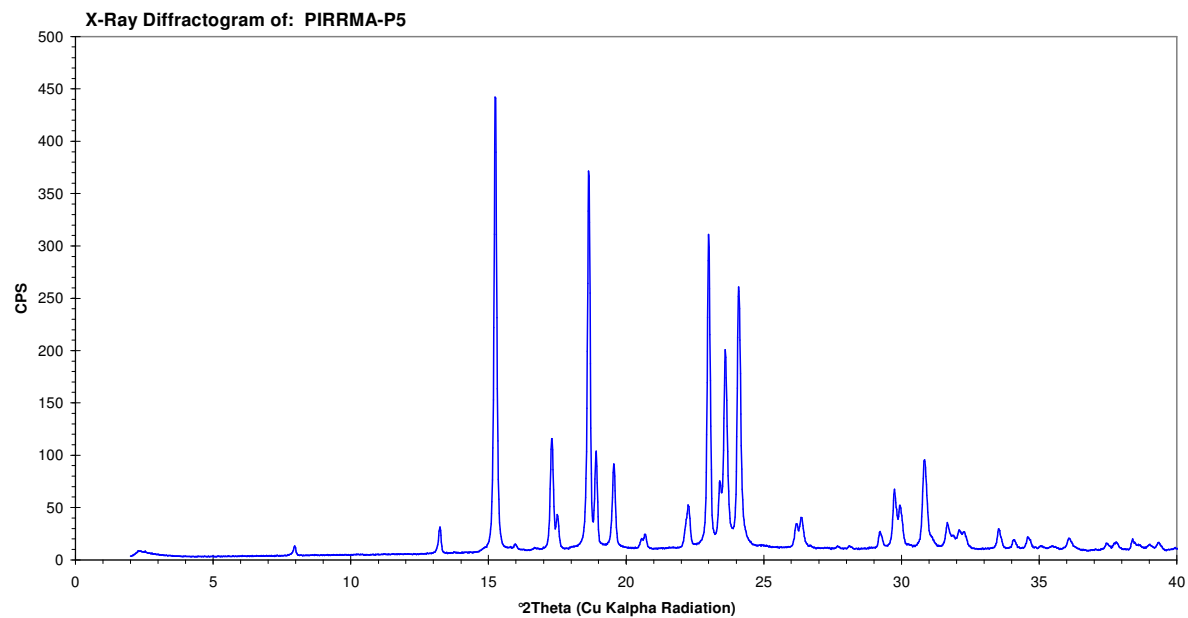


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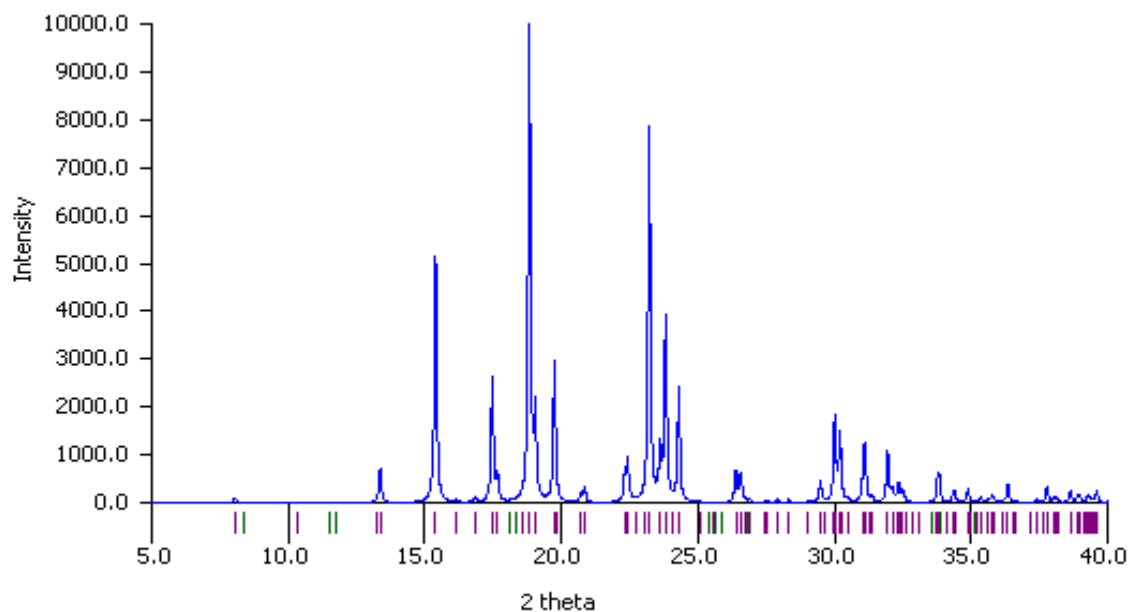


6 Comparison of measured Powder X-ray Diffraction Data with Data calculated from Single Crystal Structures

PMA



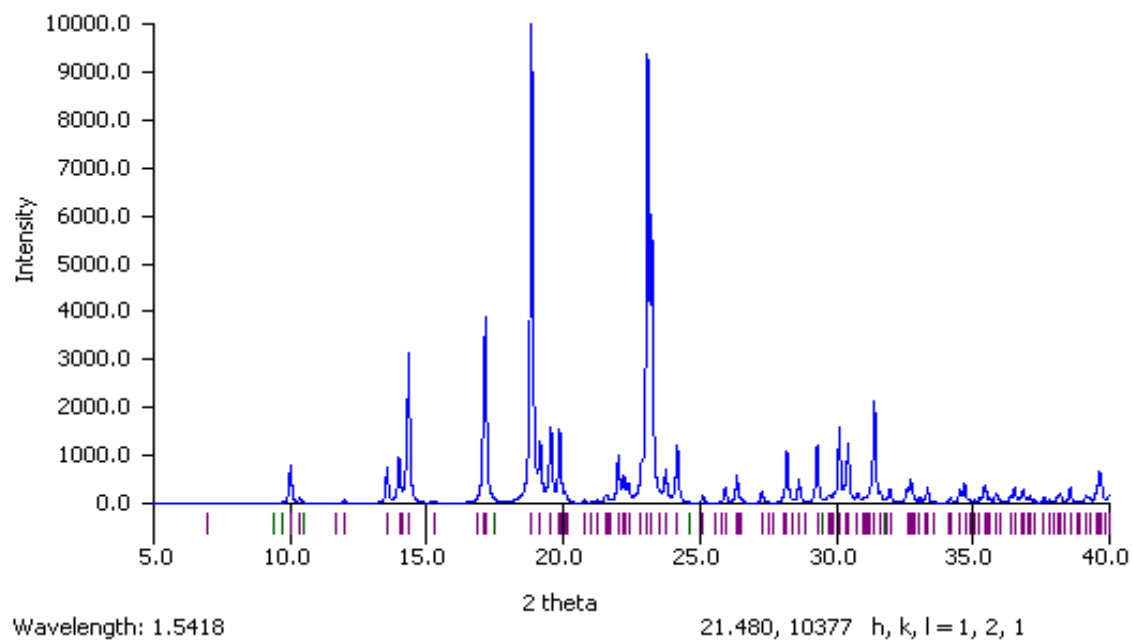
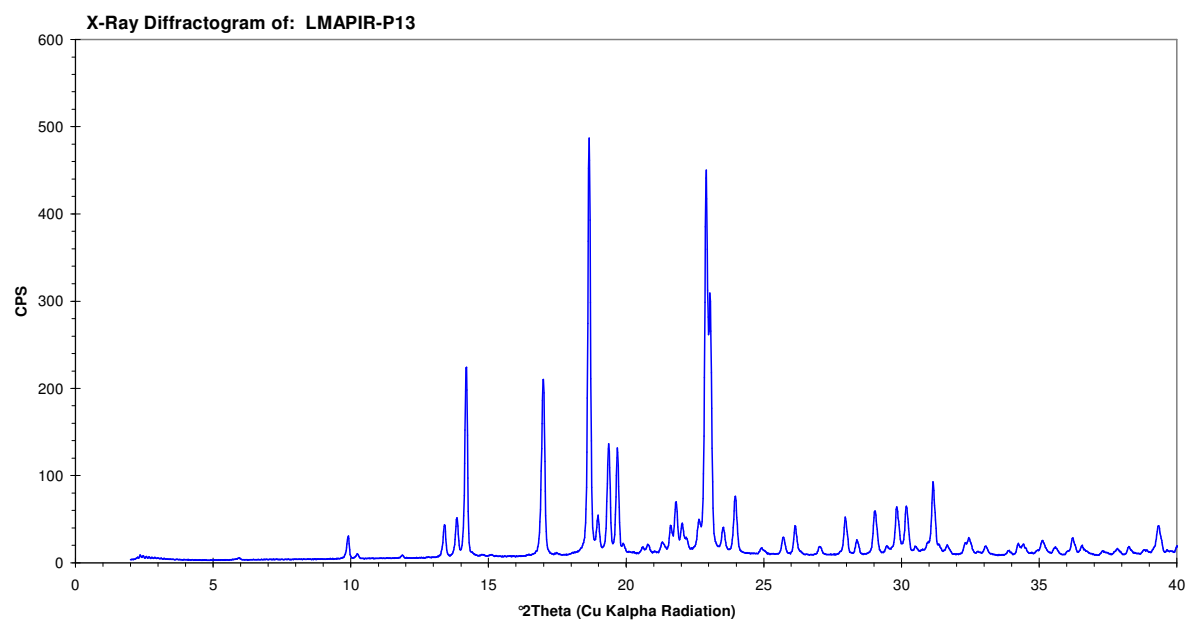
PIRMA-P5 - Comment: Prep: as received, 0.1mm on Si, SOP A52.S200 - File: C906_intern F+E_PIR-CC - Measured: 22.12.2006



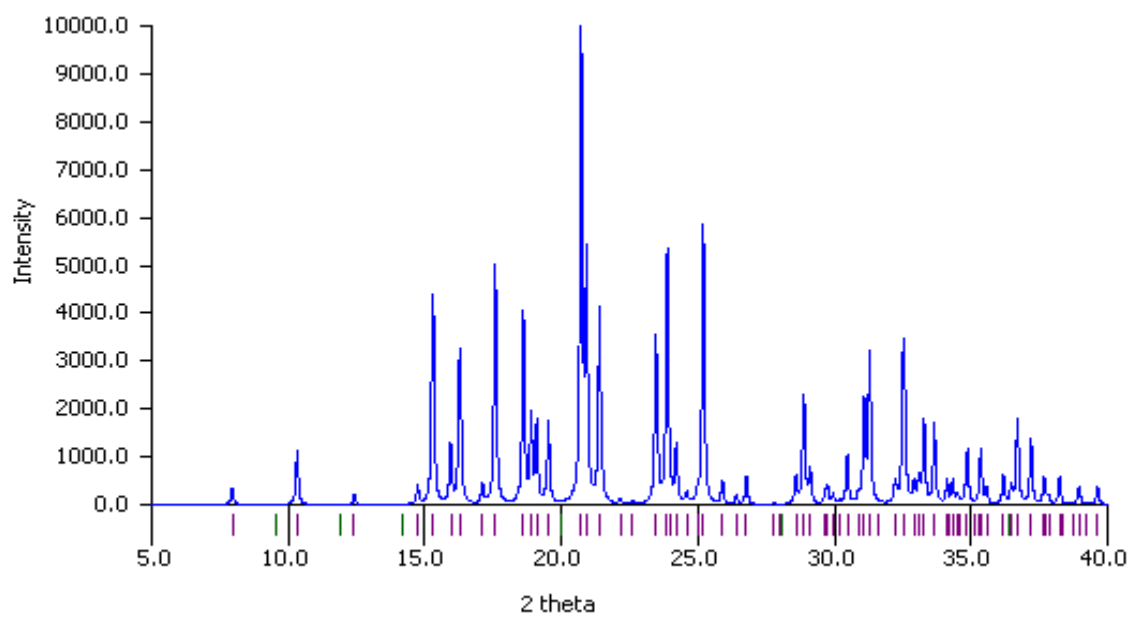
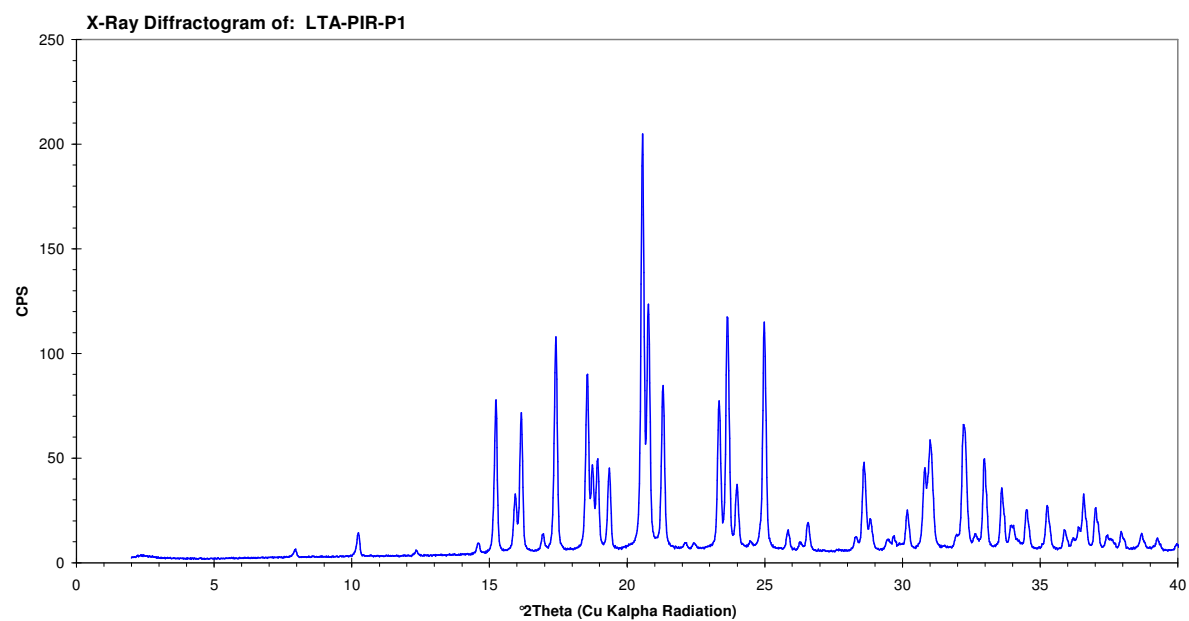
Wavelength: 1.5418

20.460, 10418 h, k, l = 2, 2, 0

PLMA



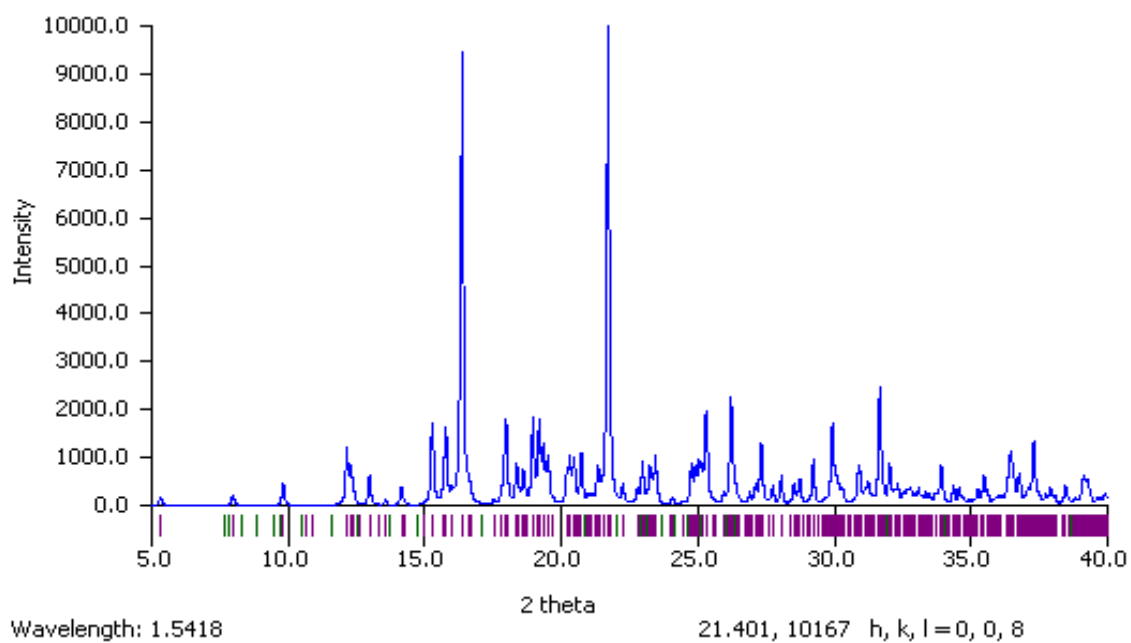
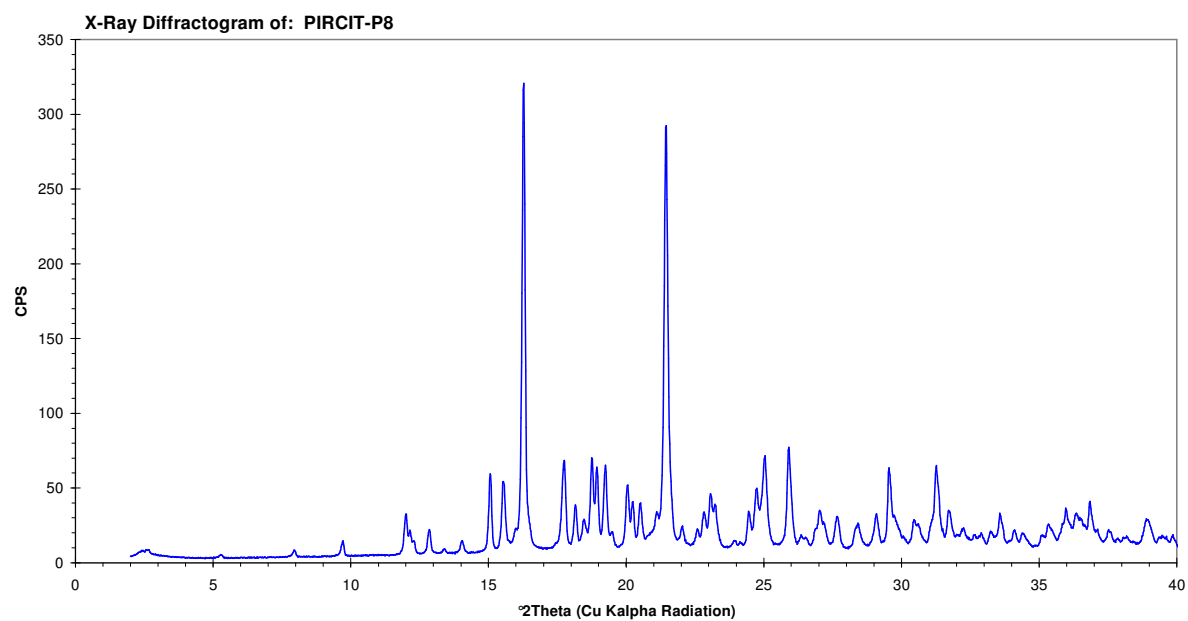
PLT



Wavelength: 1.5418

22.814, 10418 h, k, l = 0, 2, 3

PCI-2



PCI-1

