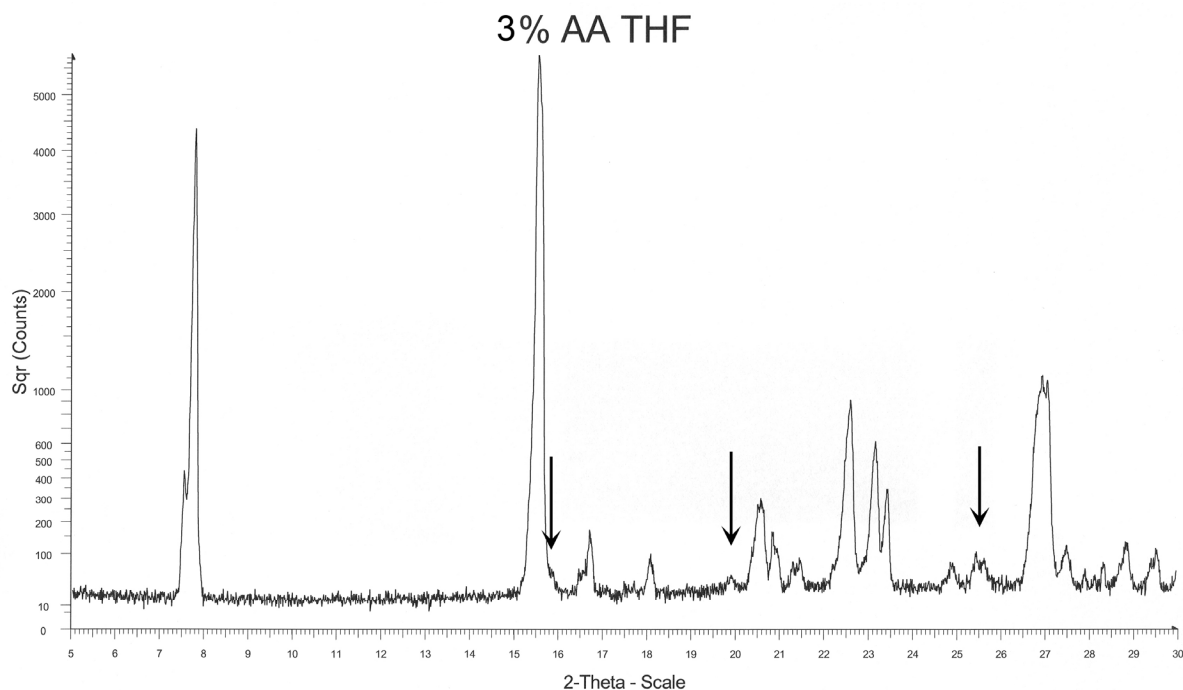


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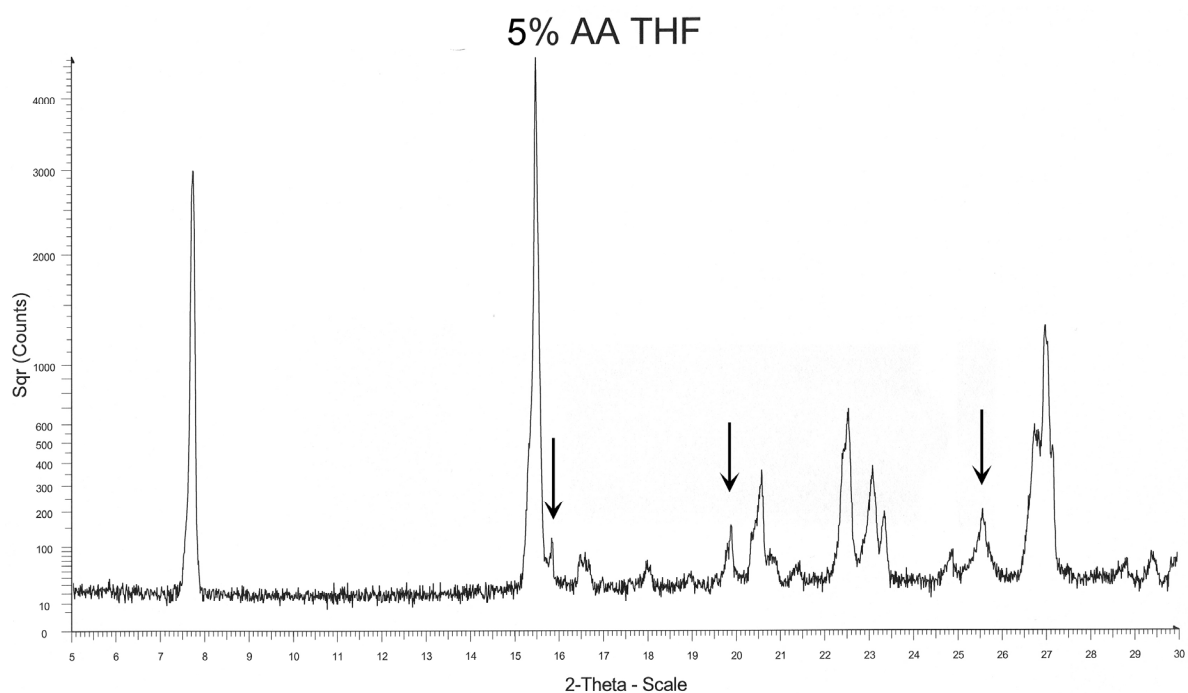
S1. PXRD patterns for collected crystals after evaporation to dryness

- Intensity plotted on **square-root scale** to emphasise weak peaks.
- Peaks attributed to Form II are highlighted with arrows.
- [Batches with 1 or 2 wt. % aspirin anhydride in THF showed no clear Form II peaks in the PXRD and are not shown here].

a) Aspirin / aspirin anhydride (3 wt. %) from THF

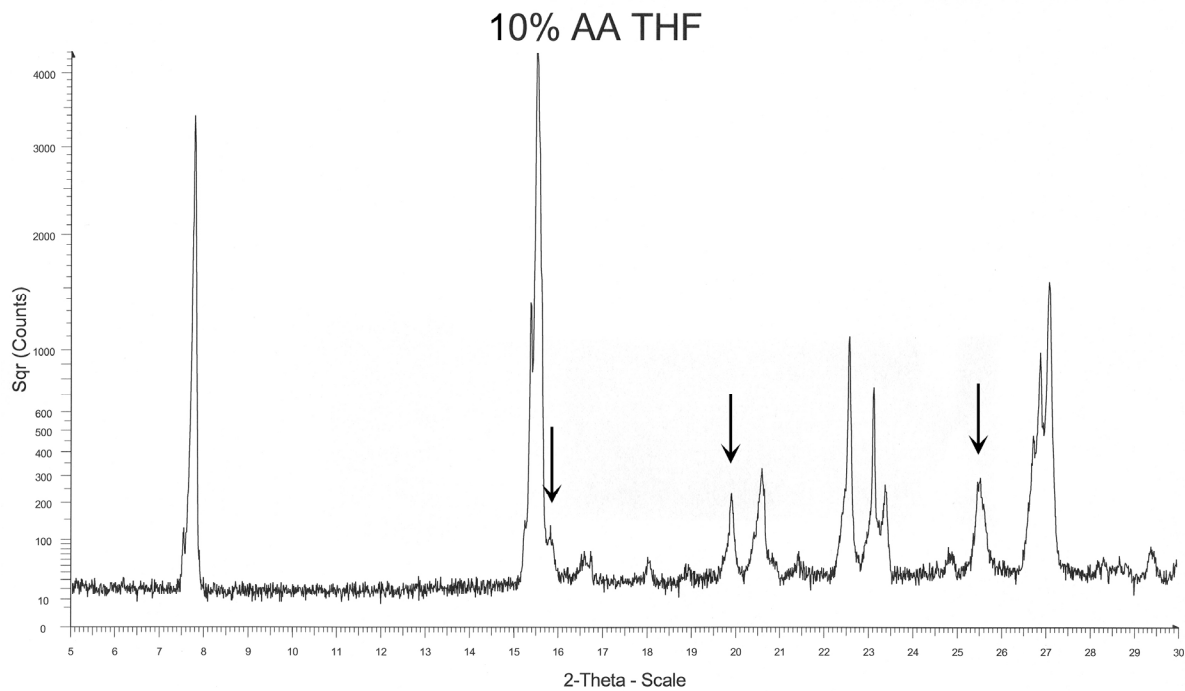


b) Aspirin / aspirin anhydride (5 wt. %) from THF

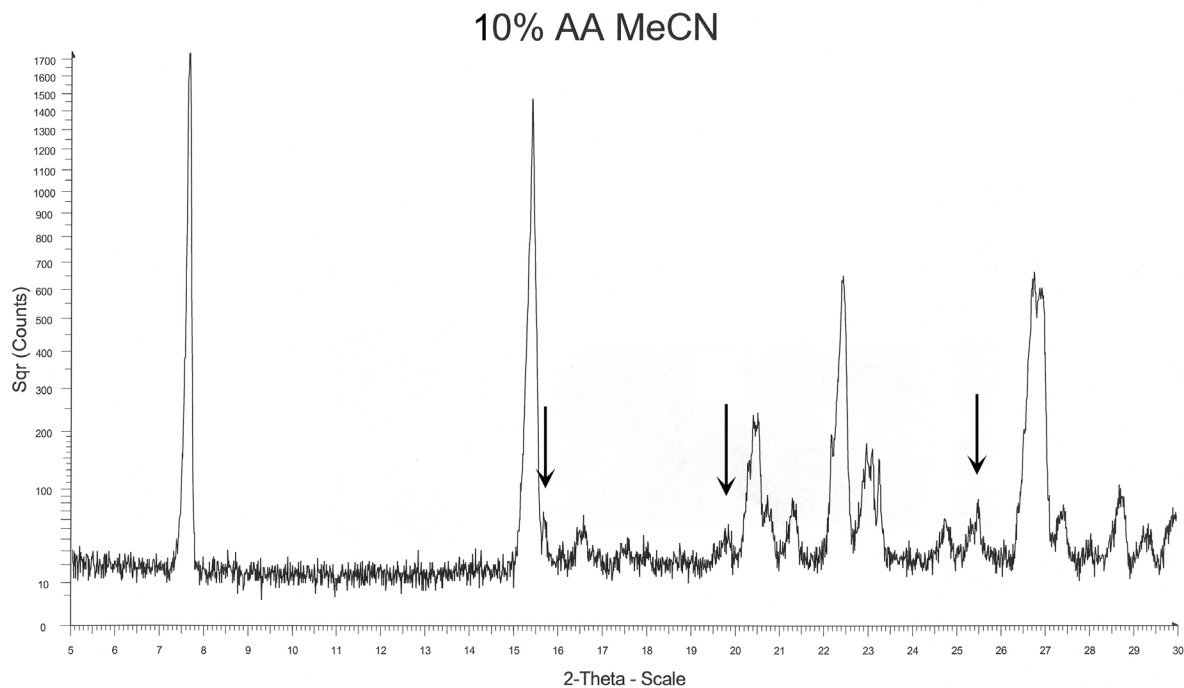


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c) Aspirin / aspirin anhydride (10 wt. %) from THF



d) Aspirin / aspirin anhydride (10 wt. %) from MeCN

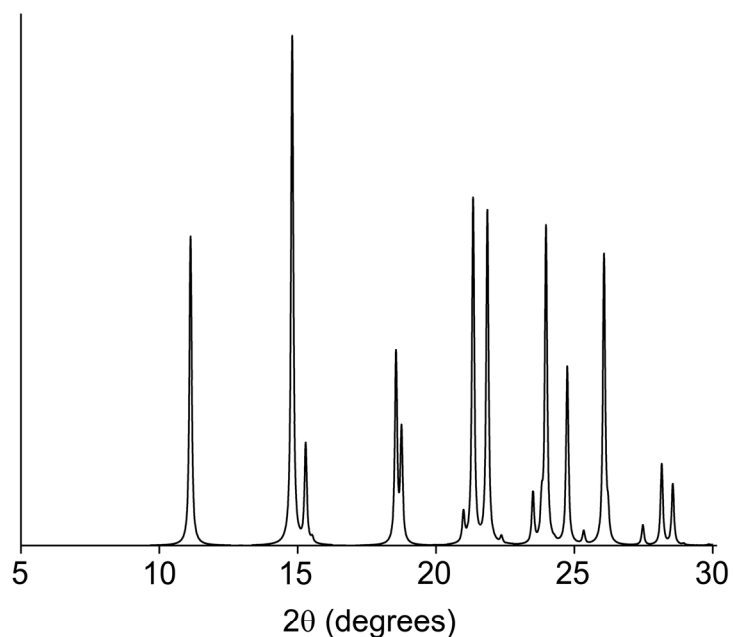


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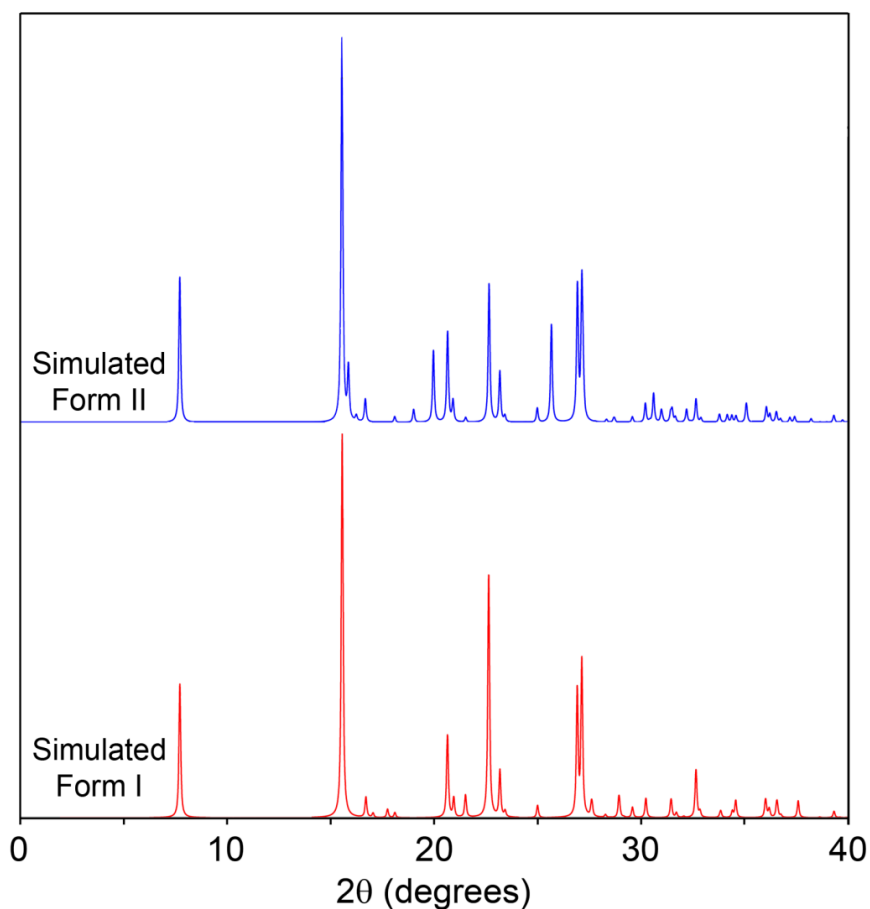
S2. Aspirin anhydride: simulated PXRD profile

CSD: ASPRIN, $P4_12_12$, $a = b = 8.457(1)$, $c = 23.166(8)$ Å.

[CuK α , 298K, from S. R. Byrn & P. Y. Siew, *J. Pharm. Sci.*, 1981, **70**, 280.]



S3. Simulated PXRD patterns for aspirin form I and form II



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S4. Unit cells for aspirin form II as a function of pressure

	<i>a</i> (Å)	<i>b</i> (Å)	<i>c</i> (Å)	α (°)	β (°)	γ (°)	Vol (Å ³)
0.14 GPa							
CELL	12.1944	6.5416	11.4457	90	111.6570	90	848.589
CELLSD	0.0075	0.0017	0.0032	0	0.0409	0	0.666
0.58 GPa							
CELL	11.9698	6.4787	11.2323	90	111.0183	90	813.092
CELLSD	0.0095	0.0021	0.0034	0	0.0485	0	0.761
1.20 GPa							
CELL	11.6592	6.4149	11.0125	90	110.3272	90	772.355
CELLSD	0.0088	0.0020	0.0035	0	0.0465	0	0.708
2.18 GPa							
CELL	11.3566	6.3509	10.7989	90	109.7299	90	733.139
CELLSD	0.0101	0.0020	0.0042	0	0.0530	0	0.760