**Plate 1**: 50 mg/mL MK1248 in 24 buffers duplicates. 40 mg/mL MK1248 in 24 buffers duplicates.

|  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- |
| 03/02/23 | A | B | C | D | E | F |
| 1 | b1 | b2 | b3 | b4 | b5 | b6 |
| 2 | b7 | b8 | b9 | b10 | b11 | b12 |
| 3 | b13 | b14 | b15 | b16 | b17 | b18 |
| 4 | b19 | b20 | b21 | b22 | b23 | b24 |
| 5 |  |  |  |  |  |  |
| 6 |  |  |  |  |  |  |
| 7 | b1 | b2 | b3 | b4 | b5 | b6 |
| 8 | b7 | b8 | b9 | b10 | b11 | b12 |
| 9 | b13 | b14 | b15 | b16 | b17 | b18 |
| 10 | b19 | b20 | b21 | b22 | b23 | b24 |

**Plate 2**: 50 mg/mL MK1248 in 24 buffers duplicates. 0 mg/mL MK1248 in 24 buffers duplicates. 40 mg/mL MK1248 in 24 buffers duplicates.

|  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- |
| 03/02/23 | A | B | C | D | E | F |
| 1 | b1 | b2 | b3 | b4 | b5 | b6 |
| 2 | b7 | b8 | b9 | b10 | b11 | b12 |
| 3 | b13 | b14 | b15 | b16 | b17 | b18 |
| 4 | b19 | b20 | b21 | b22 | b23 | b24 |
| 5 | b13 | b14 | b15 | b16 | b17 | b18 |
| 6 | b19 | b20 | \*\*b22 | \*\*b21 | b23 | b24 |
| 7 | b1 | b2 | b3 | b4 | b5 | b6 |
| 8 | b7 | b8 | b9 | b10 | b11 | b12 |
| 9 | b13 | b14 | b15 | b16 | b17 | b18 |
| 10 | b19 | b20 | b21 | b22 | b23 | b24 |

**Plate 3**: 50 mg/mL MK1248 in 24 buffers duplicates. 40 mg/mL MK1248 in 24 buffers duplicates.

|  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- |
| 03/02/23 | A | B | C | D | E | F |
| 1 | b1 | b2 | b3 | b4 | b5 | b6 |
| 2 | b7 | b8 | b9 | b10 | b11 | b12 |
| 3 | b13 | b14 | b15 | b16 | b17 | b18 |
| 4 | b19 | b20 | b21 | b22 | b23 | b24 |
| 5 |  |  |  |  |  |  |
| 6 |  |  |  |  |  |  |
| 7 | b1 | b2 | b3 | b4 | b5 | b6 |
| 8 | b7 | b8 | b9 | b10 | b11 | b12 |
| 9 | b13 | b14 | b15 | b16 | b17 | b18 |
| 10 | b19 | b20 | b21 | b22 | b23 | b24 |

**Plate 4**: 20 mg/mL MK1248 in 24 buffers duplicates. 0 mg/mL MK1248 in 24 buffers duplicates. 10 mg/mL MK1248 in 24 buffers duplicates.

|  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- |
| 03/02/23 | A | B | C | D | E | F |
| 1 | b1 | b2 | b3 | b4 | b5 | b6 |
| 2 | b7 | b8 | b9 | b10 | b11 | b12 |
| 3 | b13 | b14 | b15 | b16 | b17 | b18 |
| 4 | b19 | b20 | b21 | b22 | b23 | b24 |
| 5 | b13 | b14 | b15 | b16 | b17 | b18 |
| 6 | b19 | b20 | b21 | b22 | b23 | b24 |
| 7 | b1 | b2 | b3 | b4 | b5 | b6 |
| 8 | b7 | b8 | b9 | b10 | b11 | b12 |
| 9 | b13 | b14 | b15 | b16 | b17 | b18 |
| 10 | b19 | b20 | b21 | b22 | b23 | b24 |

**Plate 5**: 20 mg/mL MK1248 in 24 buffers duplicates. 0 mg/mL MK1248 in 24 buffers duplicates. 10 mg/mL MK1248 in 24 buffers duplicates.

|  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- |
| 03/03/23 | A | B | C | D | E | F |
| 1 | b1 | b2 | b3 | b4 | b5 | b6 |
| 2 | b7 | b8 | b9 | b10 | b11 | b12 |
| 3 | b13 | b14 | b15 | b16 | b17 | b18 |
| 4 | b19 | b20 | b21 | b22 | b23 | b24 |
| 5 | b1 | b2 | b3 | b4 | b5 | b6 |
| 6 | b7 | b8 | b9 | b10 | b11 | b12 |
| 7 | b1 | b2 | b3 | b4 | b5 | b6 |
| 8 | b7 | b8 | b9 | b10 | b11 | b12 |
| 9 | b13 | b14 | b15 | b16 | b17 | b18 |
| 10 | b19 | b20 | b21 | b22 | b23 | b24 |

**Plate 6**: 20 mg/mL MK1248 in 24 buffers duplicates. 10 mg/mL MK1248 in 24 buffers duplicates.

|  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- |
| 03/03/23 | A | B | C | D | E | F |
| 1 | b1 | b2 | b3 | b4 | b5 | b6 |
| 2 | b7 | b8 | b9 | b10 | b11 | b12 |
| 3 | b13 | b14 | b15 | b16 | b17 | b18 |
| 4 | b19 | b20 | b21 | b22 | b23 | b24 |
| 5 |  |  |  |  |  |  |
| 6 |  |  |  |  |  |  |
| 7 | b1 | b2 | b3 | b4 | b5 | b6 |
| 8 | b7 | b8 | b9 | b10 | b11 | b12 |
| 9 | b13 | b14 | b15 | b16 | b17 | b18 |
| 10 | b19 | b20 | b21 | b22 | b23 | b24 |

**Plate 7**: 0 mg/mL MK1248 in 24 buffers duplicates.

|  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- |
| 03/03/23 | A | B | C | D | E | F |
| 1 | b1 | b2 | b3 | b4 | b5 | b6 |
| 2 | b7 | b8 | b9 | b10 | b11 | b12 |
| 3 |  |  |  |  |  |  |
| 4 | b13 | b14 | b15 | b16 | b17 | b18 |
| 5 | b19 | b20 | b21 | b22 | b23 | b24 |
| 6 |  |  |  |  |  |  |
| 7 | b1 | b2 | b3 | b4 | b5 | b6 |
| 8 | b7 | b8 | b9 | b10 | b11 | b12 |
| 9 |  |  |  |  |  |  |
| 10 |  |  |  |  |  |  |

**Observation Notations**

0: clear

C1a: a few small particles C1b: many small particles

C2a: a few large crystals C2b: many large crystals

Cs: Single large crystals (isolated crystals)

L: liquid condensates (droplets or phase separated layers)

A: amorphous aggregates (rare)

G: gel (very rare)

Observation Date: 03/10/23

**Plate 1**: 50 mg/mL MK1248 in 24 buffers duplicates. 40 mg/mL MK1248 in 24 buffers duplicates.

|  |  |  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| 03/10/23 | A | | | | B | C | | | D | E | F |
| 1 | C1a | C1a | C1a | C1a | C1b, C2b | | | | | | C1a, C2a |
| 2 | C1a, C2a | | | | C1a | C1b | C1b | C1b | C2b | | |
| 3 | C1b | C1b | C1b, C2a, Cs? | | | | | | C1b, Cs? | C1b | C1a |
| 4 | C1b | | | | C2b | C2b | | | C1b | C2b | C1b, C2a, Cs? |
| 5 |  | | | |  |  | | |  |  |  |
| 6 |  | | | |  |  | | |  |  |  |
| 7 | C1a | C1a | C1b | C1a | | | | | | C2a | C1a, C2a |
| 8 | C1a | C1a | C1b | C1a, C2a | | | | | | C1a, C2a | C1a |
| 9 | C1a | C1a | C1b, Cs | | | | | | C1b | C1b | C1b, C2b, Cs? |
| 10 | C1a | C1a | C2a | | | | | | C1b | C1a | C1a, Cs? |

**Plate 2**: 50 mg/mL MK1248 in 24 buffers duplicates. 0 mg/mL MK1248 in 24 buffers duplicates. 40 mg/mL MK1248 in 24 buffers duplicates.

|  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| 03/10/23 | A | | | B | | C | D | E | F |
| 1 | C1a | | | C1b | C1b | C1a | | C1a, C2b | C1a, C2b |
| 2 | C1a, C2b | | | C1a | | C1b, C2a | C1a, C2b | C1a, C2b | C1b, C2b |
| 3 | C1a, C2a | | | C1b, C2a | | 0 | 0 | C1b, C2a | C1a |
| 4 | C1b | | | C2a | | C2b Cs | C1a | C1b, C2b | C1a |
| 5 | 0 | | | 0 | | 0 | 0 | 0 | 0 |
| 6 | 0 | | | 0 | | 0 | 0 | 0 | 0 |
| 7 | C1b | C1b | C1b | C1b | | | | C2a | C2a |
| 8 | C1b | C1b | C1b | C1a, C2b | | | | C1a | C1a |
| 9 | C1a | | | C1a | | C1b | C1b | C1b | C1b, C2b |
| 10 | C1a, Cs | | | C2a | | C2a | C1b, Cs? | C2a | C2a, C1a, Cs? |

**Plate 3**: 50 mg/mL MK1248 in 24 buffers duplicates. 40 mg/mL MK1248 in 24 buffers duplicates.

|  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- |
| 03/10/23 | A | B | C | D | E | F |
| 1 | C1a | C1a | C1a | C1a | C1b | C1b |
| 2 | C1b | C1a | C1b | C1b | C1b | C1b |
| 3 | C1b, C2a | C1b, C2a | C1a | C1a, Cs | C1b | C1b |
| 4 | C1b | C1a | C1b | C1a | C1b | C1a |
| 5 |  |  |  |  |  |  |
| 6 |  |  |  |  |  |  |
| 7 | C1a, Cs | C1a | C1b | C1a | C1a | C1a |
| 8 | C1a | C1a | C1b | C1b | C1a | C1a |
| 9 | C1a | C1a | C1b | C1b | C1a | C1b, C2a |
| 10 | C1a | C1a | C1a, Cs | C1b | C1b | C2a |

**Plate 4**: 20 mg/mL MK1248 in 24 buffers duplicates. 0 mg/mL MK1248 in 24 buffers duplicates. 10 mg/mL MK1248 in 24 buffers duplicates.

|  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- |
| 03/10/23 | A | B | C | D | E | F |
| 1 | C1a | C1b | C1a, C2a | C1a | C1a, C2a | C1a |
| 2 | C1a | C1a | C1a | C1a | C1a | C1a |
| 3 | C1a | C1a | C1a | C1a | C1b | C1a, C2b |
| 4 | C1a | C1a | C1a, C2a | C1a | C1b | C1b, C2a |
| 5 | 0 | 0 | 0 | 0 | 0 | 0 |
| 6 | 0 | 0 | 0 | 0 | 0 | 0 |
| 7 | C1a | C1a | C1a | C1a | C1a | C1a, Cs |
| 8 | C1a | C1a | C1a | C1a | C1a | 0 |
| 9 | C1a | C1a | C1a | C1a | C1a | C2a |
| 10 | C1a | C1a | C1a, Cs | C1a, C2a, Cs | C1a | C2a, C1a |

**Plate 5**: 20 mg/mL MK1248 in 24 buffers duplicates. 0 mg/mL MK1248 in 24 buffers duplicates. 10 mg/mL MK1248 in 24 buffers duplicates.

|  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- |
| 03/10/23 | A | B | C | D | E | F |
| 1 | C1a | C1a | C1a, strand? | C1a | C1a | C1b |
| 2 | C1a | C1a | C1a | C1b,C2b | C1a | C1a |
| 3 | C1a | C1a | C1a | C1b | C1a | C1b, C2b, Cs |
| 4 | C1a | C1a | C1a | C1b,C2a | C1b, Cs | C1b, C2a |
| 5 | 0 | 0 | 0 | 0 | 0 | 0 |
| 6 | 0 | 0 | 0 | 0 | 0 | 0 |
| 7 | C1a | C1a | C1a | C1a | C1a | C1a, cs |
| 8 | C1a | C1a | C1a | C1a | C1a | C1a |
| 9 | C1a | C1a | C1a | C1a | C1a | C2a |
| 10 | C1a | C1a, strand? | C1a | C1b, C2a | C1a | C1a |

**Plate 6**: 20 mg/mL MK1248 in 24 buffers duplicates. 0 mg/mL MK1248 in 24 buffers duplicates. 10 mg/mL MK1248 in 24 buffers duplicates.

|  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| 03/10/23 | A | | | B | C | D | | E | F |
| 1 | C1a | | | C1a | C1a | Cs | | C1a | C1a |
| 2 | C1a | | | C1a | C1a | C1b | | C1a | C1a |
| 3 | C1a | | | C1a | C1a | C1a | C1a | C1a | |
| 4 | C1a | C1a | C1a | C1b, C2a, Cs | | | | C1b | C2a |
| 5 |  | | |  |  |  | |  |  |
| 6 |  | | |  |  |  | |  |  |
| 7 | Cs | | | C1a | C1a | C1a | | C1a | C1a |
| 8 | C1a | | | C1a | C1b | C1b | | C1a | C1a |
| 9 | C1a | | | Cs? | C1a | C1a | | C1a | C1a, C2a |
| 10 | C1a | | | C1a | C1a | C1b | | C1a | C1a |

**Plate 7**: 0 mg/mL MK1248 in 24 buffers duplicates.

|  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- |
| 03/10/23 | A | B | C | D | E | F |
| 1 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2 | 0 | 0 | 0 | 0 | 0 | 0 |
| 3 |  |  |  |  |  |  |
| 4 | 0 | 0 | 0 | 0 | 0 | 0 |
| 5 | 0 | Cs | 0 | 0 | 0 | 0 |
| 6 |  |  |  |  |  |  |
| 7 | 0 | 0 | 0 | 0 | \*\*\*0, Strand? | 0 |
| 8 | 0 | 0 | 0 | 0 | 0 | 0 |
| 9 |  |  |  |  |  |  |
| 10 |  |  |  |  |  |  |

|  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- |
|  | **Formulation** | ***T*cloud (°C)** | **10 mg/mL** | **20 mg/mL** | **40 mg/mL** | **50 mg/mL** |
| b1 | Acetate pH 4.5 | < –1 | Clear | clear | clear | clear |
| b2 | Acetate pH 5.0 | < –1 | Clear | clear | clear | clear |
| b3 | Acetate pH 5.5 | < –1 | Clear | Some small crystals | clear | clear |
| b4 | Succinate pH 4.5 | < –1 | Clear | clear | clear | clear |
| b5 | Succinate pH 5.0 | < –1 | Clear | Some small crystals | A few small crystals | Some small crystals |
| b6 | Succinate pH 5.5 | 5 | A few small crystals | Some small crystals | A few small crystals | Some small crystals |
| b7 | Succinate pH 6.0 | 1 | Clear | A few small crystals | clear | Many medium crystals |
| b8 | Citrate pH 4.5 | 3 | Clear | clear | clear | clear |
| b9 | Citrate pH 5.0 | 5 | A few small crystals | clear | A few small crystals | A few small crystals |
| b10 | Citrate pH 5.5 | 3 | A few small crystals | clear | A few small crystals | A few small crystals |
| b11 | Citrate pH 6.0 | 1 | A few small crystals | clear | A few small crystals | Many small crystals |
| b12 | Citrate pH 6.5 | 3 | A few small crystals | A few small crystals | A few small crystals | Many medium crystals |
| b13 | Histidine pH 5.5 | < –1 | Clear | clear | clear | Some small crystals |
| b14 | Histidine pH 6.0 | 6 | Clear | clear | A few small crystals | Some small crystals |
| b15 | Histidine pH 6.5 | 9 | Clear | clear | A few clustered crystals | A few large crystals |
| b16 | Histidine pH 7.0 | 9 | Clear | clear | A few large crystals | A few large crystals |
| b17 | Phosphate pH 6.0 | 3 | Clear | clear | A few medium crystals | Some small crystals |
| b18 | Phosphate pH 6.5 | 3 | A few small crystals | Many small and large crystals | Many small and large crystals | A few small crystals |
| b19 | Phosphate pH 7.0 | 1 | Clear | clear | clear | A few small crystals |
| b20 | Phosphate pH 7.5 | 3 | clear | clear | A few small crystals | Many medium crystals |
| b21 | Phosphate pH 8.0 | -1 | Some small crystals | Some small crystals | Some small crystals | Many medium crystals |
| b22 | Tris pH 7.5 | -1 | Some small crystals | clear | clear | clear |
| b23 | Tris pH 8.0 | < –1 | A few small crystals | A few small crystals | Some small crystals | Some small crystals |
| b24 | Tris pH 8.5 | < –1 | Some small crystals | A few small crystals | A few large crystals | Some small crystals |