

# Human insulin:PEGylated amylin

Stability of combined formulation

Supporting Information

**Physico-chemical stability of co-formulation of  
PEGylated human amylin with insulin**

Celimar Sinezia<sup>1</sup>, Caio Victor M. F. do Nascimento<sup>3</sup>,  
Paulo G. S. Lacativa<sup>3</sup>, Luís Maurício T. R. Lima<sup>1,2</sup>

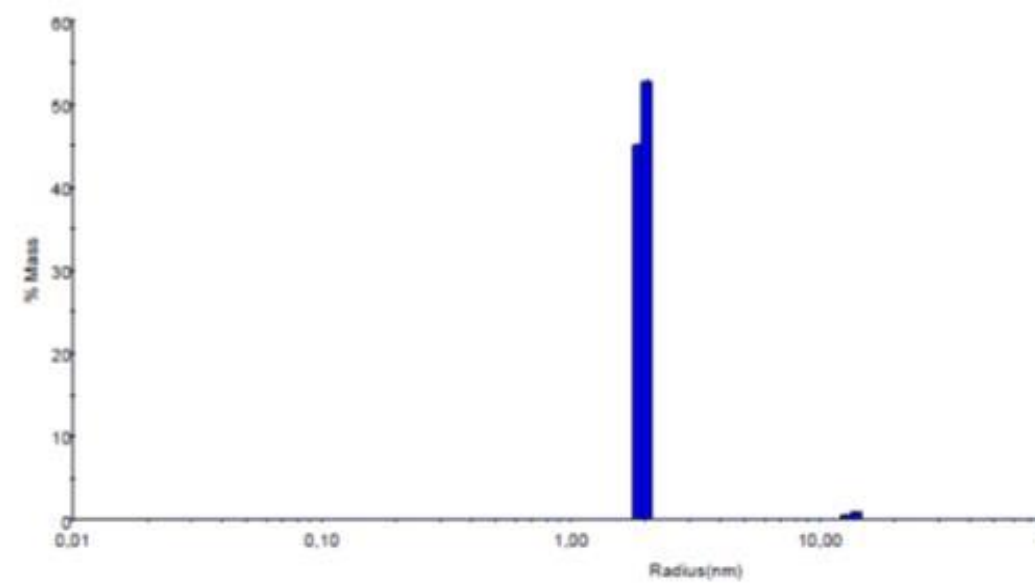
# **Glargine Insulin : Human PEGylated Amylin** *raw data*

Glargine Insulin (95 U/mL)  
+ hAmylin-PEGsc5k  
0.1 mg/mL or 0.5 mg/mL

# Glargine – hAmy-PEG Time 0

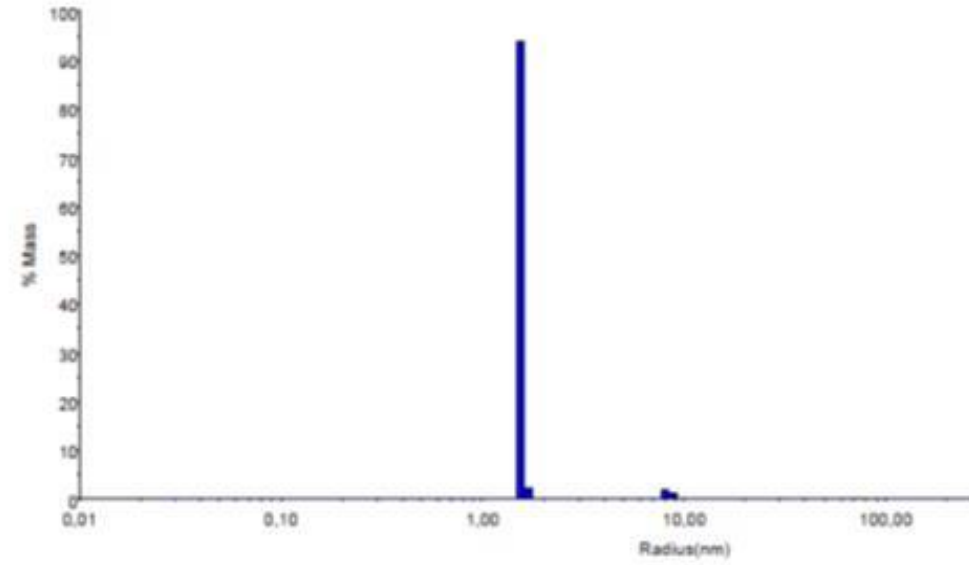
hAmypeg Ø

Regularization Results: glar



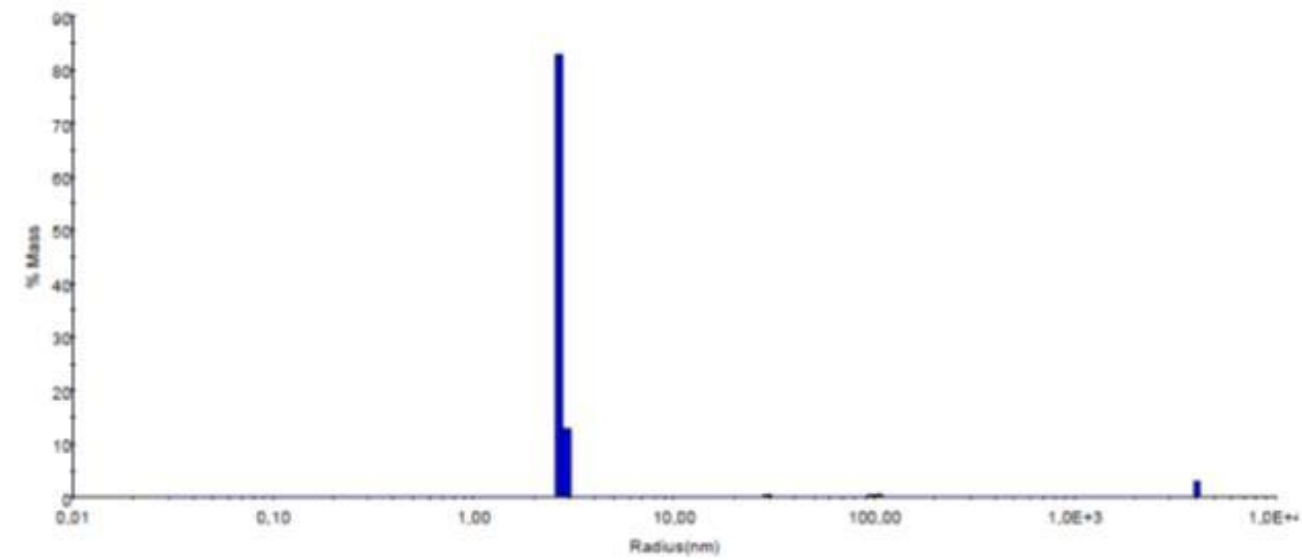
|        | Radius<br>(nm) | %Pd | Mw-R<br>(kDa) | %Intensity | %Mass |
|--------|----------------|-----|---------------|------------|-------|
| Peak 1 | 1.949          | 4.6 | 16            | 2.4        | 97.9  |
| Peak 2 | 13.480         | 4.5 | 1481          | 12.1       | 1.5   |
| Peak 3 | 94.589         | 3.5 | 141335        | 85.4       | 0.5   |

Regularization Results: glar



|        | Radius<br>(nm) | %Pd | Mw-R<br>(kDa) | %Intensity | %Mass |
|--------|----------------|-----|---------------|------------|-------|
| Peak 1 | 1.545          | 1.4 | 9             | 1.3        | 95.8  |
| Peak 2 | 8.367          | 4.5 | 485           | 6.3        | 3.0   |
| Peak 3 | 74.610         | 3.9 | 81125         | 85.7       | 0.3   |
| Peak 4 | 1071.290       | 4.0 | 41357400      | 6.7        | 0.9   |

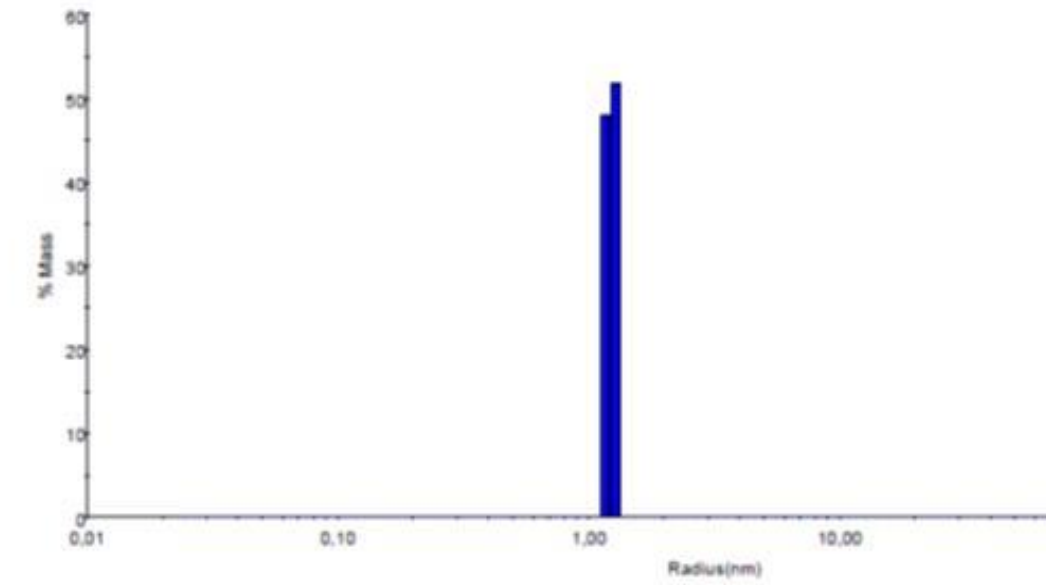
Regularization Results: glar



|        | Radius<br>(nm) | %Pd | Mw-R<br>(kDa) | %Intensity | %Mass |
|--------|----------------|-----|---------------|------------|-------|
| Peak 1 | 2.709          | 3.2 | 35            | 4.0        | 95.5  |
| Peak 2 | 29.171         | 1.0 | 9013          | 19.2       | 0.5   |
| Peak 3 | 101.252        | 4.5 | 165736        | 72.8       | 1.1   |
| Peak 4 | 4155.080       | 0.0 | 986123000     | 4.0        | 2.9   |

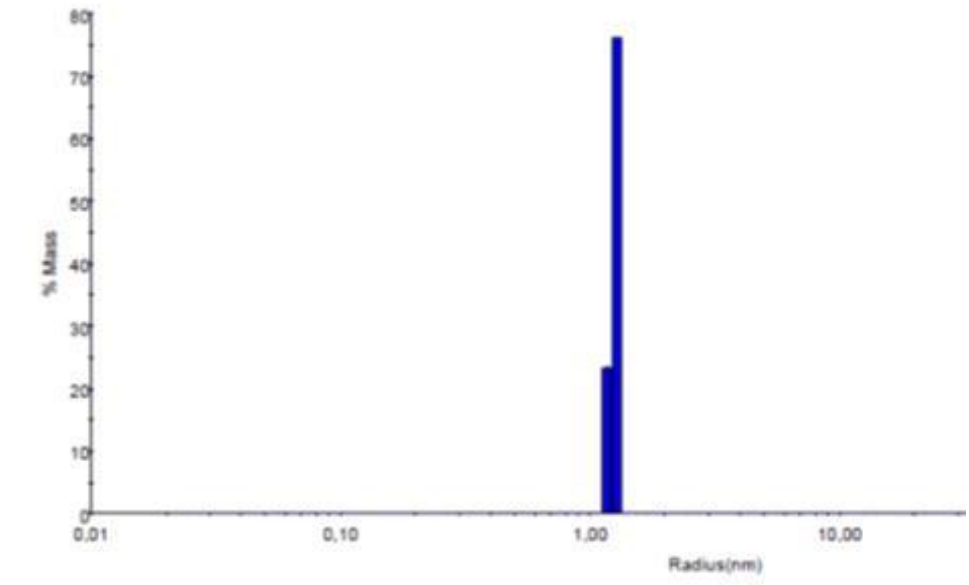
hAmypeg 100 µg/mL

Regularization Results: glarhAmypeg 1 t0 2m\_ml



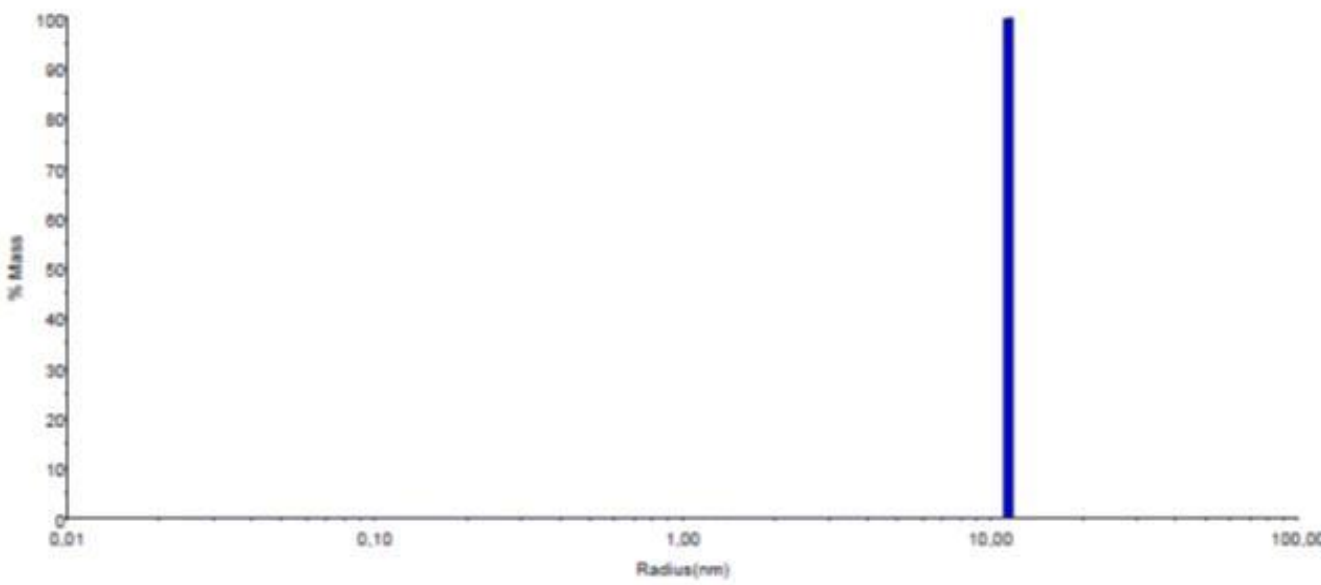
|        | Radius<br>(nm) | %Pd | Mw-R<br>(kDa) | %Intensity | %Mass |
|--------|----------------|-----|---------------|------------|-------|
| Peak 1 | 1.229          | 4.6 | 5             | 6.9        | 99.8  |
| Peak 2 | 28.879         | 2.7 | 8804          | 37.9       | 0.1   |
| Peak 3 | 111.201        | 4.5 | 206379        | 55.2       | 0.1   |

Regularization Results: glarhAmypeg 2 t0 2mg\_ml



|        | Radius<br>(nm) | %Pd | Mw-R<br>(kDa) | %Intensity | %Mass |
|--------|----------------|-----|---------------|------------|-------|
| Peak 1 | 1.256          | 3.8 | 6             | 7.7        | 99.7  |
| Peak 2 | 35.601         | 3.6 | 14365         | 40.1       | 0.0   |
| Peak 3 | 118.791        | 4.2 | 240856        | 52.2       | 0.3   |

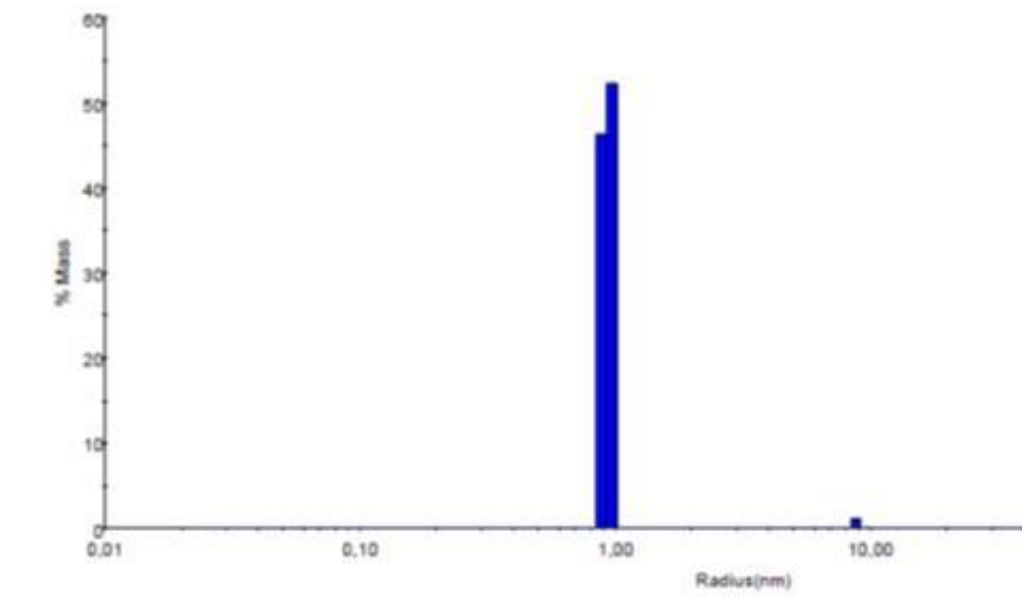
Regularization Results: larhAmypeg 3 t0 2mg\_ml



|        | Radius<br>(nm) | %Pd | Mw-R<br>(kDa) | %Intensity | %Mass |
|--------|----------------|-----|---------------|------------|-------|
| Peak 1 | 11.630         | 0.0 | 1048          | 100.0      | 100.0 |

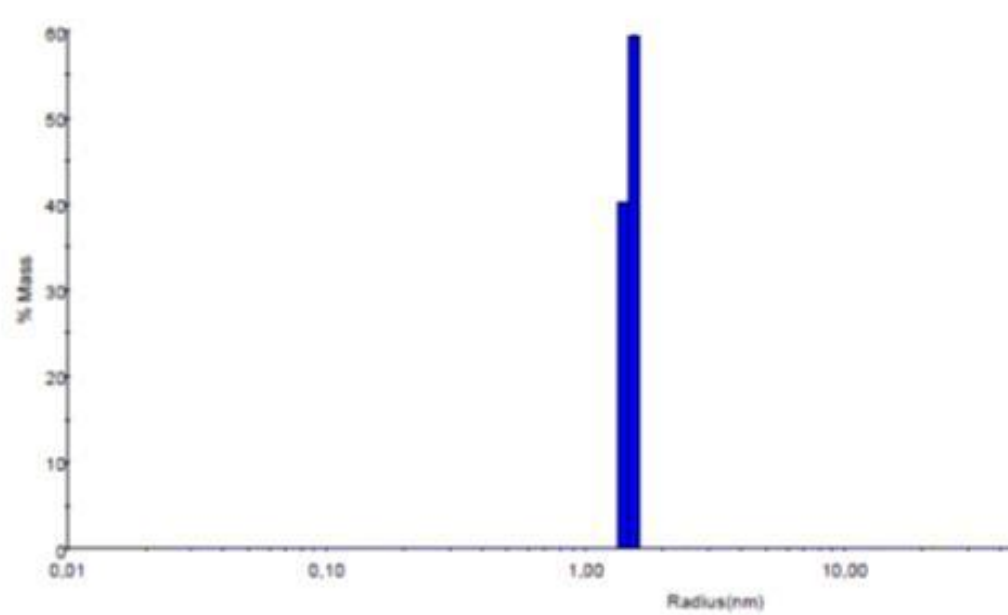
hAmypeg 500 µg/mL

Regularization Results: glarhAmypeg 1 t0



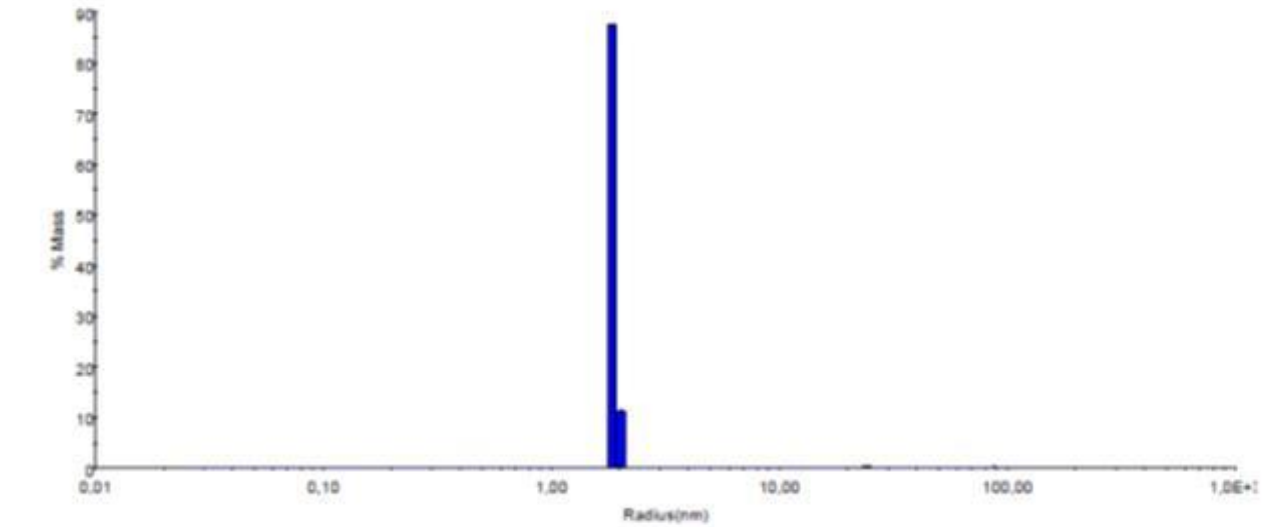
|        | Radius<br>(nm) | %Pd | Mw-R<br>(kDa) | %Intensity | %Mass |
|--------|----------------|-----|---------------|------------|-------|
| Peak 1 | 0.934          | 4.6 | 3             | 0.8        | 98.6  |
| Peak 2 | 8.910          | 2.8 | 562           | 8.2        | 1.2   |
| Peak 3 | 91.607         | 4.6 | 131130        | 91.0       | 0.2   |

Regularization Results: glarhAmypeg 2 t0



|        | Radius<br>(nm) | %Pd | Mw-R<br>(kDa) | %Intensity | %Mass |
|--------|----------------|-----|---------------|------------|-------|
| Peak 1 | 1.487          | 4.5 | 9             | 3.8        | 99.7  |
| Peak 2 | 22.916         | 4.5 | 5124          | 18.5       | 0.2   |
| Peak 3 | 92.332         | 4.6 | 133570        | 77.7       | 0.1   |

Regularization Results: glarhAmypeg 3 t0



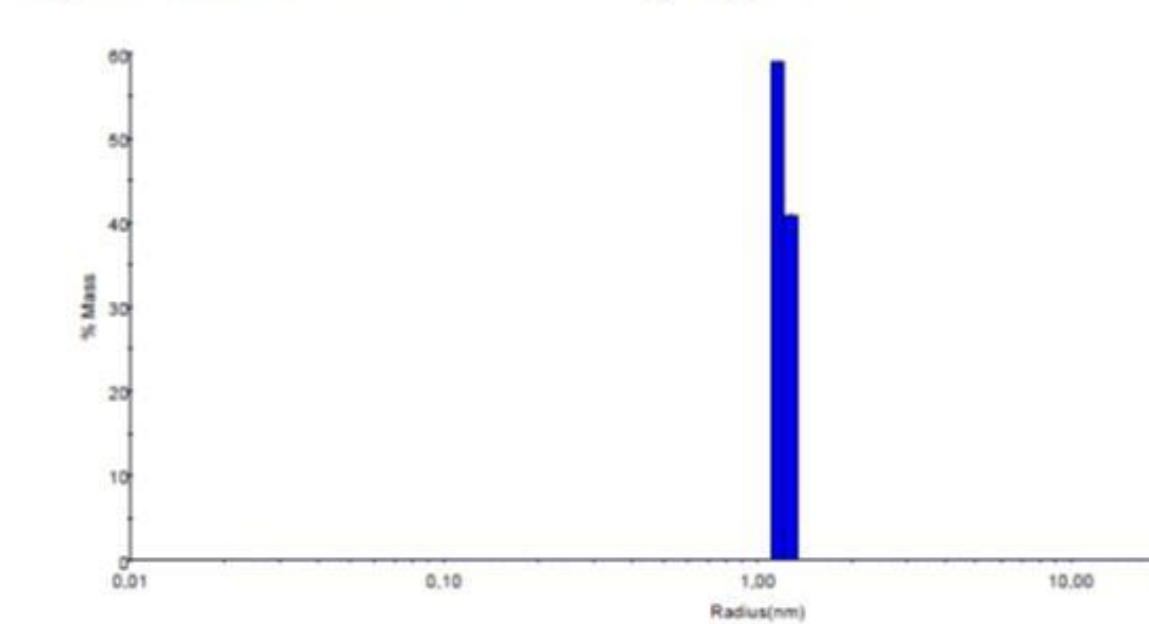
|        | Radius<br>(nm) | %Pd | Mw-R<br>(kDa) | %Intensity | %Mass |
|--------|----------------|-----|---------------|------------|-------|
| Peak 1 | 1.873          | 3.0 | 15            | 2.5        | 99.2  |
| Peak 2 | 24.368         | 2.1 | 5916          | 21.4       | 0.4   |
| Peak 3 | 88.834         | 3.2 | 122030        | 76.1       | 0.3   |



Glargine – hAmy-PEG Time 1 week

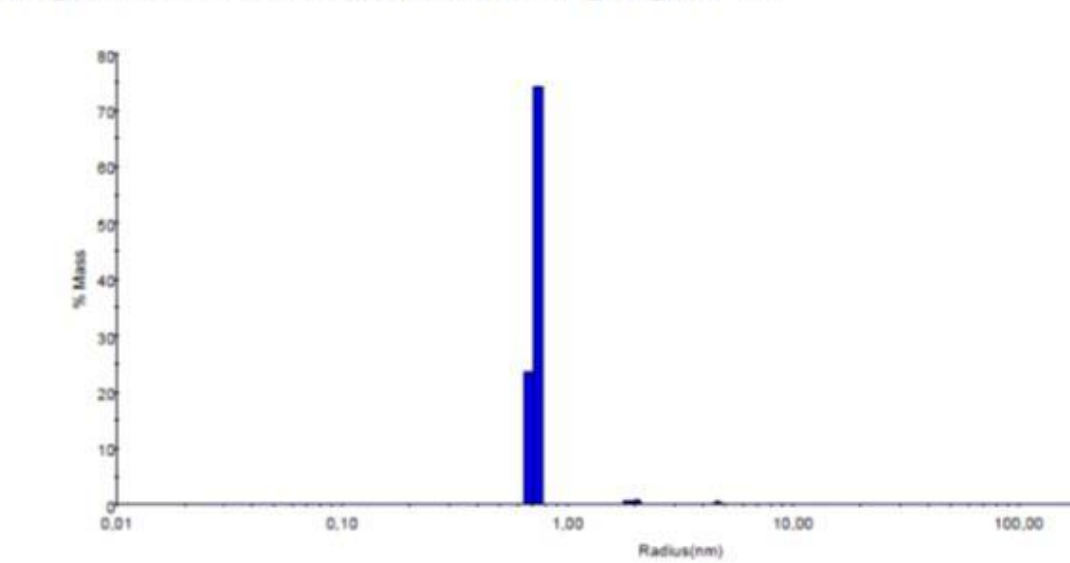
hAmypeg Ø

Regularization Results: 20150423 glargina 1w



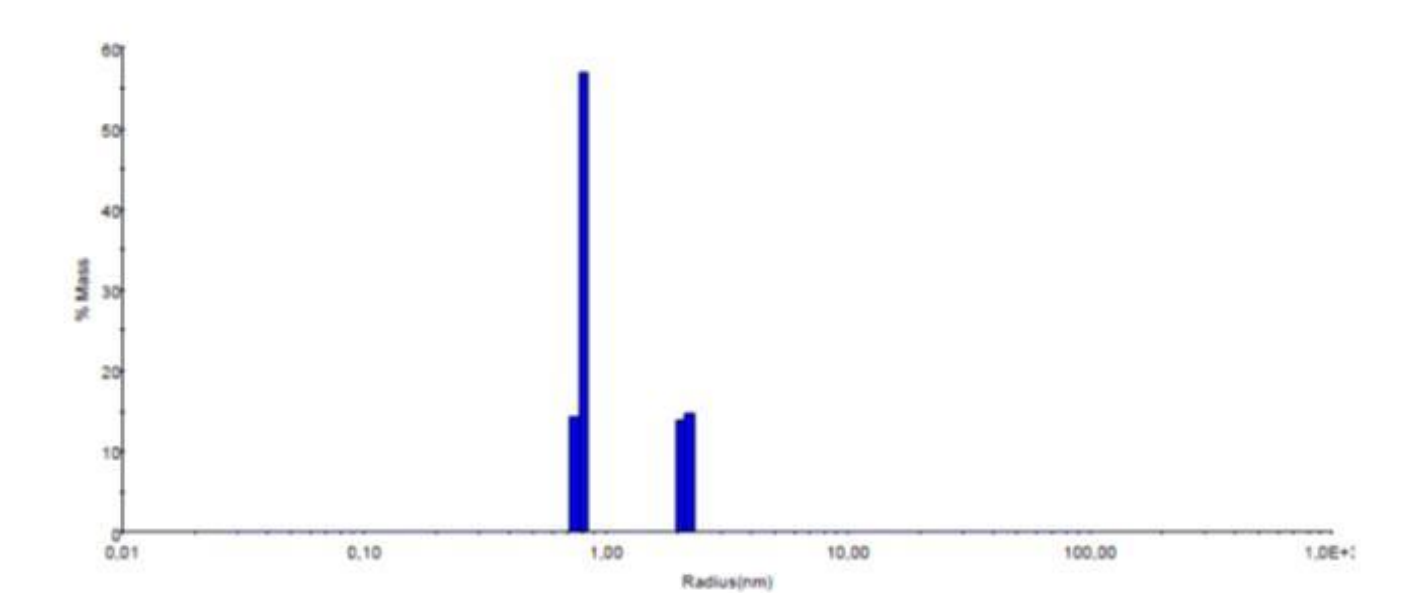
|        | Radius<br>(nm) | %Pd | Mw-R<br>(kDa) | %Intensity | %Mass |
|--------|----------------|-----|---------------|------------|-------|
| Peak 1 | 1.216          | 4.6 | 5             | 38.5       | 100.0 |
| Peak 2 | 62.098         | 4.0 | 52798         | 61.5       | 0.0   |

Regularization Results: 20150423 glargina 1w



|        | Radius<br>(nm) | %Pd | Mw-R<br>(kDa) | %Intensity | %Mass |
|--------|----------------|-----|---------------|------------|-------|
| Peak 1 | 0.724          | 3.8 | 2             | 18.3       | 97.8  |
| Peak 2 | 1.952          | 4.5 | 16            | 5.5        | 1.5   |
| Peak 3 | 4.721          | 3.6 | 127           | 32.5       | 0.6   |
| Peak 4 | 124.971        | 3.2 | 271201        | 37.0       | 0.0   |
| Peak 5 | 743.278        | 4.1 | 17583200      | 6.7        | 0.0   |

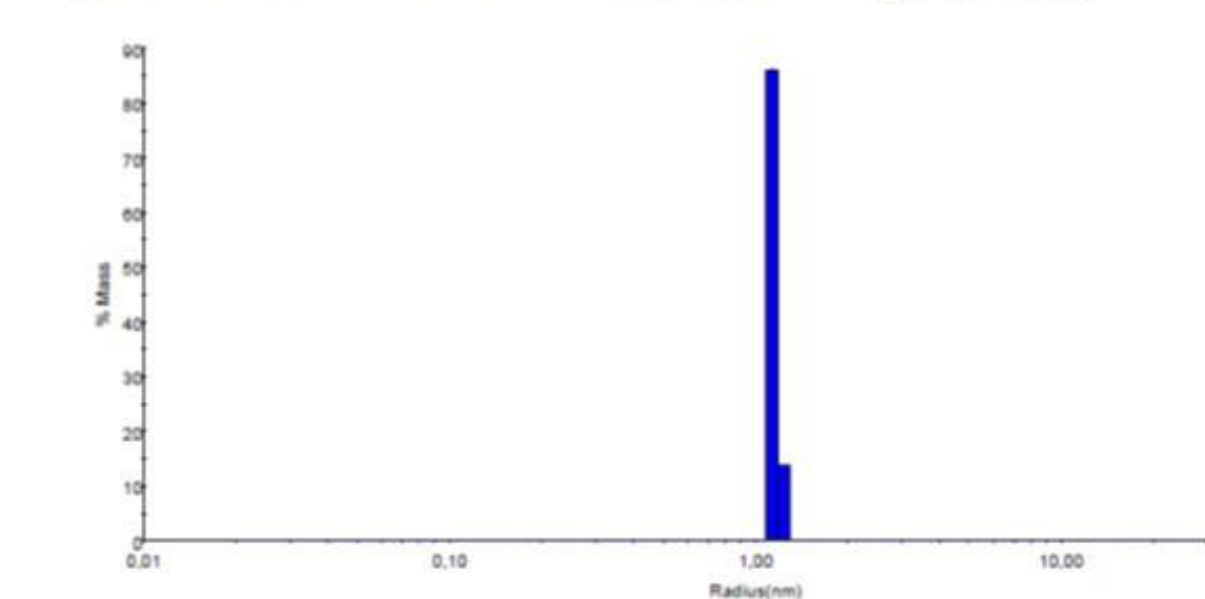
Regularization Results: 20150423 glargina 1w



|        | Radius<br>(nm) | %Pd | Mw-R<br>(kDa) | %Intensity | %Mass |
|--------|----------------|-----|---------------|------------|-------|
| Peak 1 | 0.796          | 3.6 | 2             | 5.0        | 71.3  |
| Peak 2 | 2.131          | 4.6 | 20            | 38.6       | 28.7  |
| Peak 3 | 91.424         | 4.6 | 130517        | 56.5       | 0.0   |

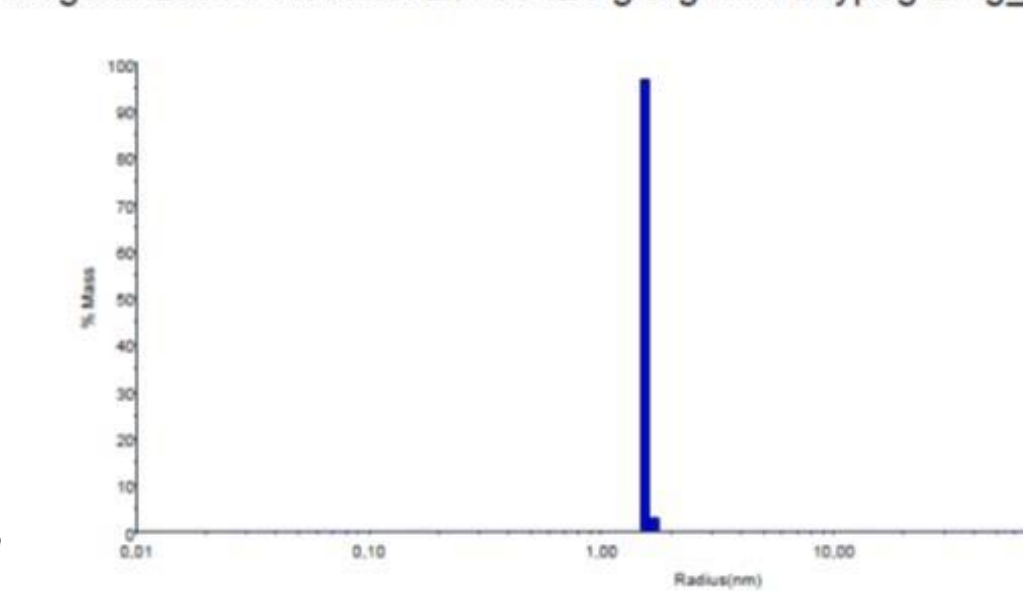
hAmypeg 100 µg/mL

Regularization Results: 20150423 glarginahAmypeg 2mg\_ml 1 1



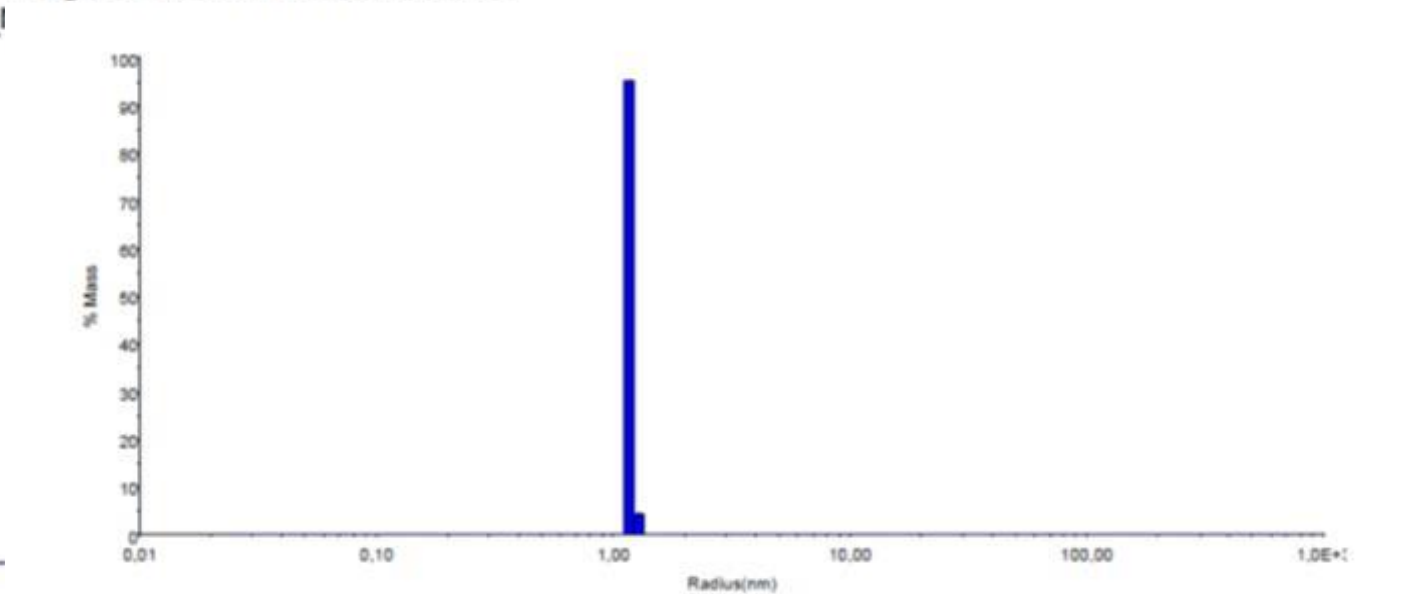
|        | Radius<br>(nm) | %Pd | Mw-R<br>(kDa) | %Intensity | %Mass |
|--------|----------------|-----|---------------|------------|-------|
| Peak 1 | 1.150          | 3.3 | 5             | 10.5       | 99.9  |
| Peak 2 | 15.383         | 4.5 | 2017          | 13.8       | 0.1   |
| Peak 3 | 65.893         | 3.8 | 60659         | 75.7       | 0.0   |

Regularization Results: 20150423 glarginahAmypeg 2mg\_ml 1 1



|        | Radius<br>(nm) | %Pd | Mw-R<br>(kDa) | %Intensity | %Mass |
|--------|----------------|-----|---------------|------------|-------|
| Peak 1 | 1.546          | 1.7 | 9             | 6.9        | 99.7  |
| Peak 2 | 11.406         | 3.7 | 1002          | 4.2        | 0.2   |
| Peak 3 | 63.364         | 4.6 | 55352         | 74.1       | 0.0   |
| Peak 4 | 341.100        | 3.7 | 2841940       | 14.8       | 0.1   |

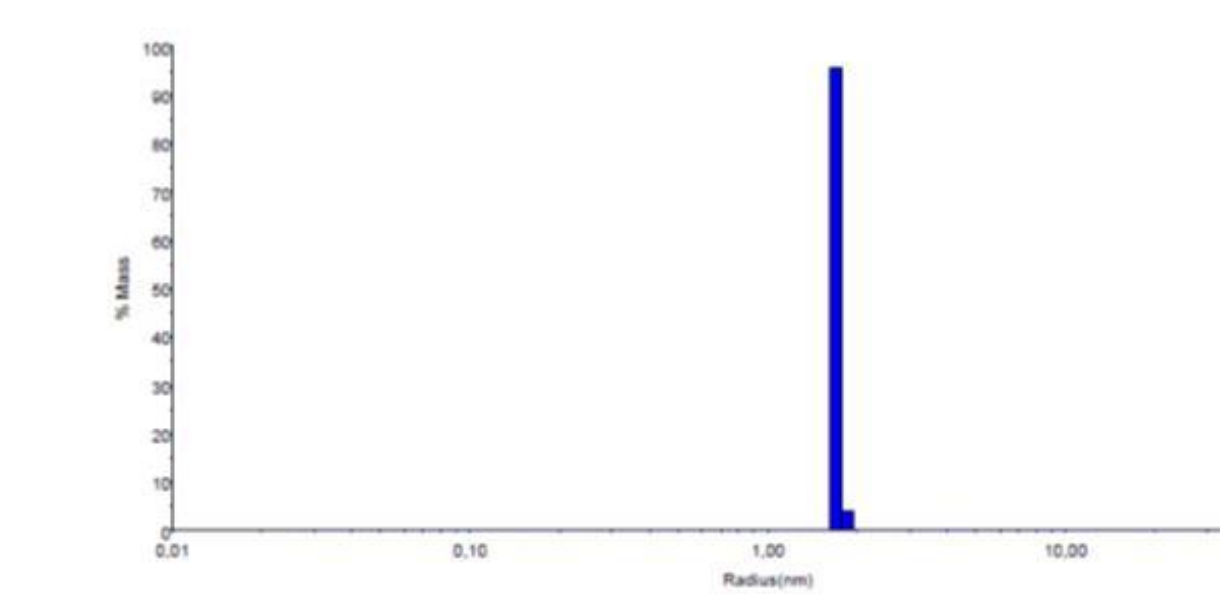
Regularization Results: 25C



|        | Radius<br>(nm) | %Pd | Mw-R<br>(kDa) | %Intensity | %Mass |
|--------|----------------|-----|---------------|------------|-------|
| Peak 1 | 1.176          | 2.0 | 5             | 6.9        | 99.9  |
| Peak 2 | 30.602         | 4.6 | 10082         | 26.4       | 0.0   |
| Peak 3 | 95.473         | 6.1 | 144446        | 59.9       | 0.0   |
| Peak 4 | 795.337        | 0.0 | 20601000      | 6.8        | 0.0   |

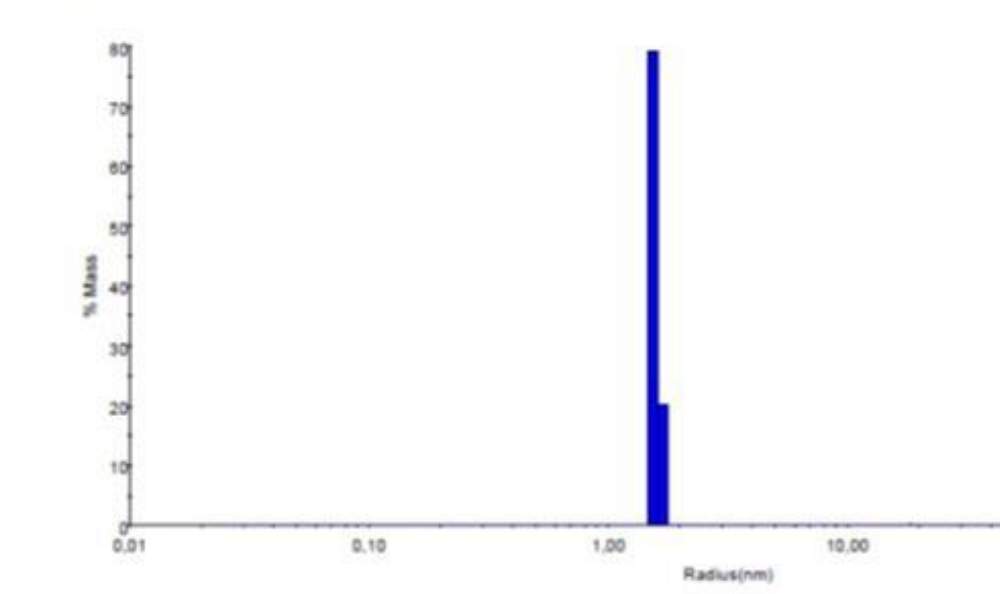
hAmypeg 500 µg/mL

Regularization Results: 20150423 glarginahAmypeg 10mg\_ml 1 1



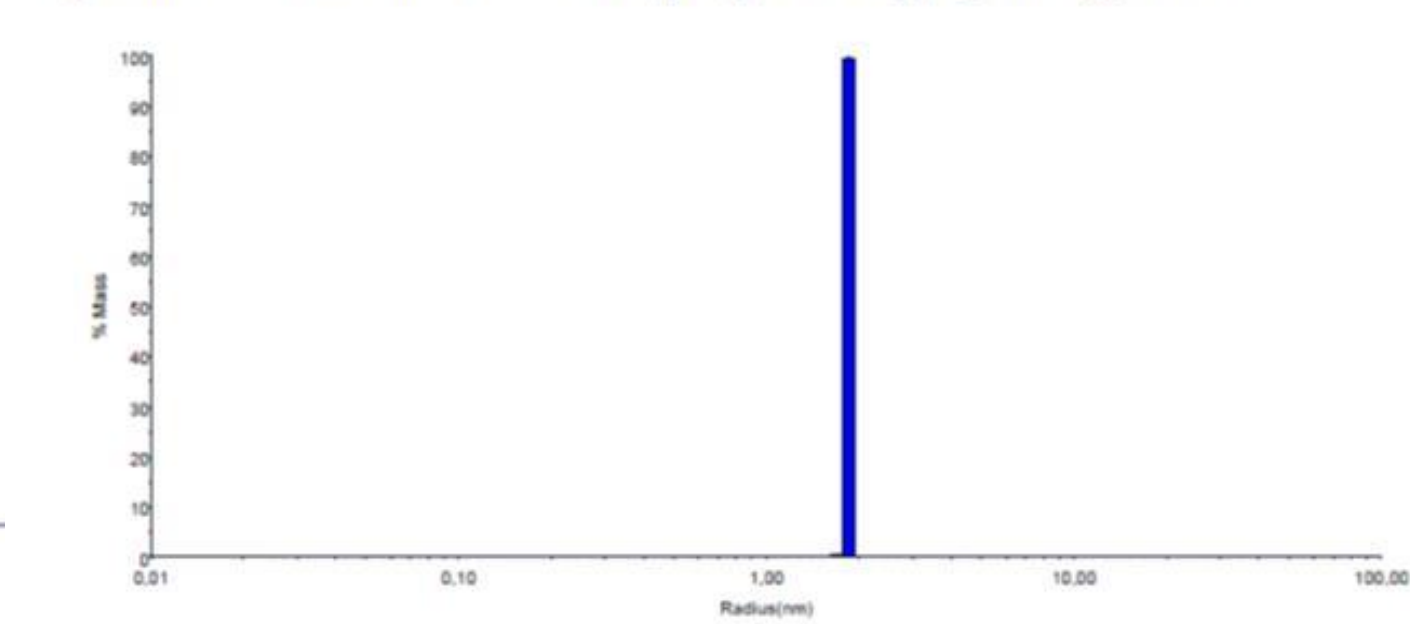
|        | Radius<br>(nm) | %Pd | Mw-R<br>(kDa) | %Intensity | %Mass |
|--------|----------------|-----|---------------|------------|-------|
| Peak 1 | 1.696          | 1.9 | 12            | 4.7        | 99.7  |
| Peak 2 | 25.232         | 4.6 | 6419          | 24.3       | 0.2   |
| Peak 3 | 87.737         | 0.0 | 118531        | 71.0       | 0.1   |

Regularization Results: 20150423 glarginahAmypeg 10mg\_ml 1 1



|        | Radius<br>(nm) | %Pd | Mw-R<br>(kDa) | %Intensity | %Mass |
|--------|----------------|-----|---------------|------------|-------|
| Peak 1 | 1.572          | 3.8 | 10            | 4.0        | 99.5  |
| Peak 2 | 18.154         | 3.2 | 2971          | 15.5       | 0.3   |
| Peak 3 | 72.083         | 3.1 | 74840         | 74.8       | 0.1   |
| Peak 4 | 670.518        | 3.3 | 13817000      | 5.7        | 0.2   |

Regularization Results: 20150423 glarginahAmypeg 10mg\_ml 3 1w

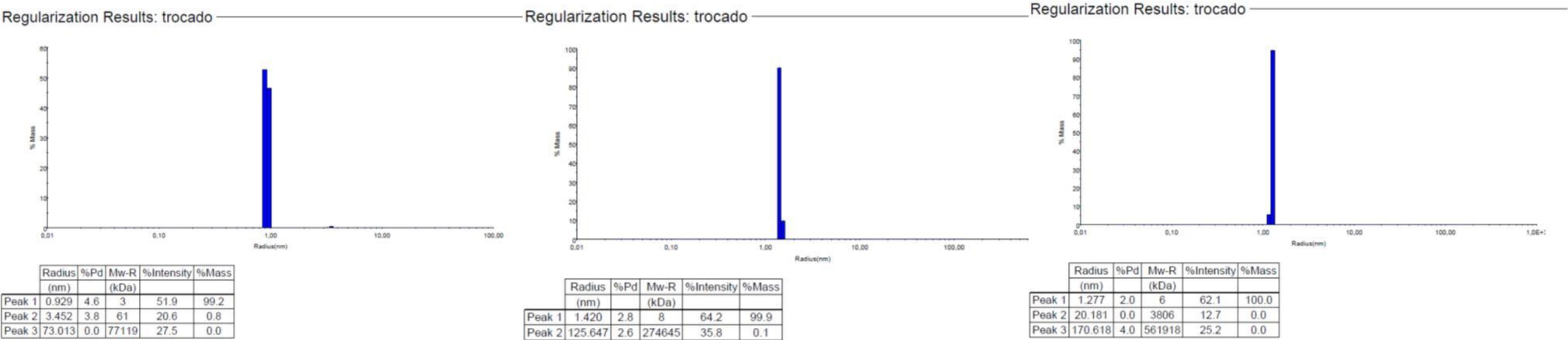


|        | Radius<br>(nm) | %Pd | Mw-R<br>(kDa) | %Intensity | %Mass |
|--------|----------------|-----|---------------|------------|-------|
| Peak 1 | 1.852          | 0.5 | 14            | 22.5       | 100.0 |
| Peak 2 | 82.227         | 4.2 | 101843        | 77.5       | 0.0   |

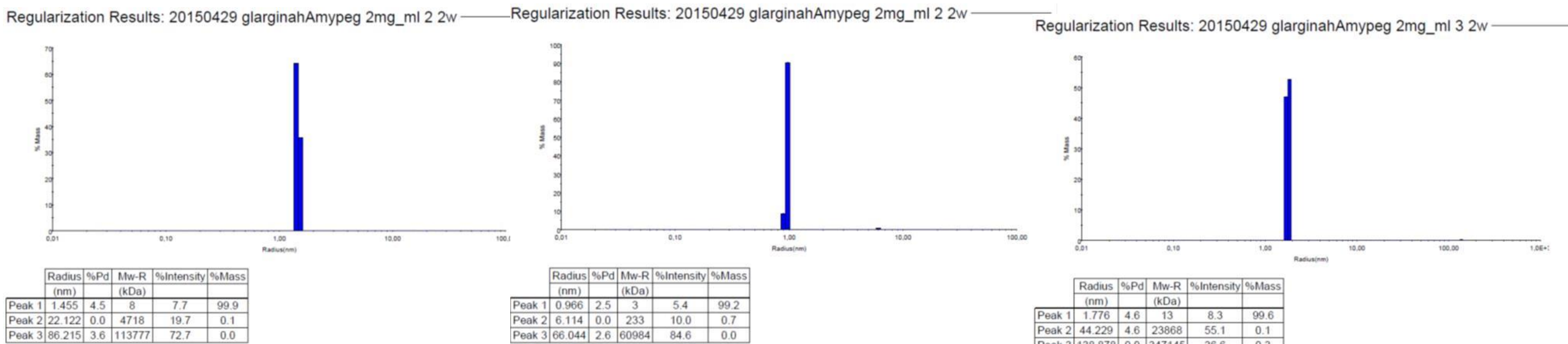


# Glargine – hAmy-PEG Time 2 weeks

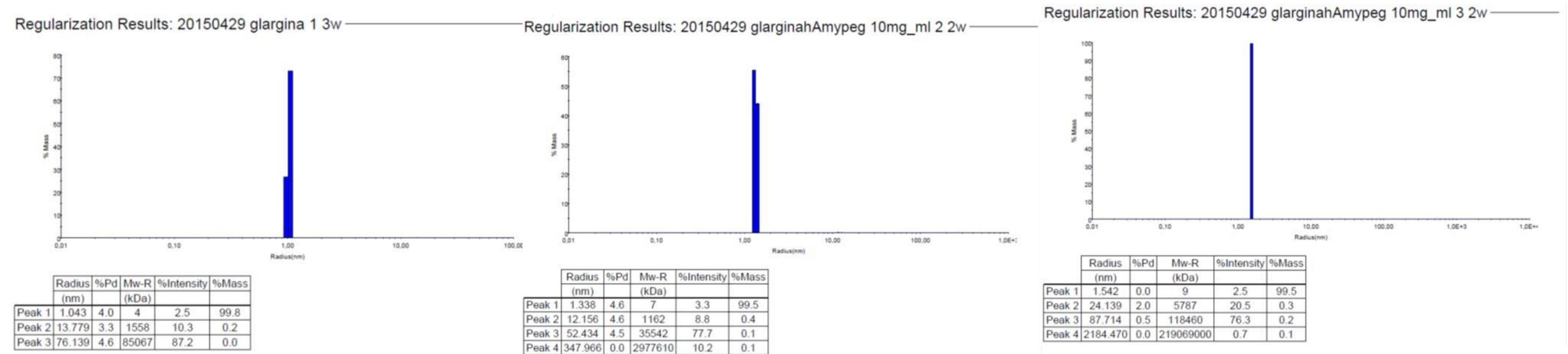
hAmypeg Ø



hAmypeg 100 µg/mL



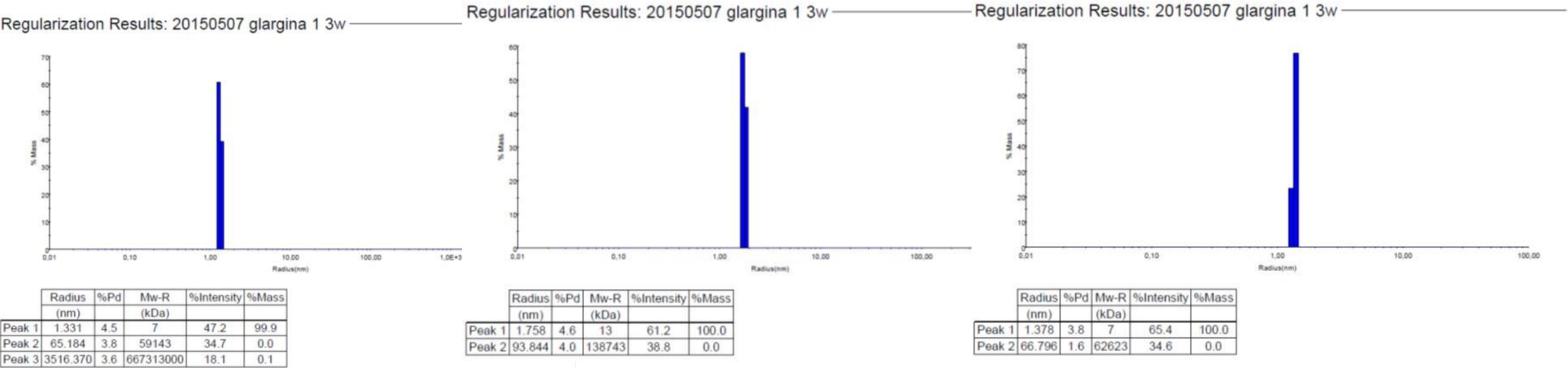
hAmypeg 500 µg/mL



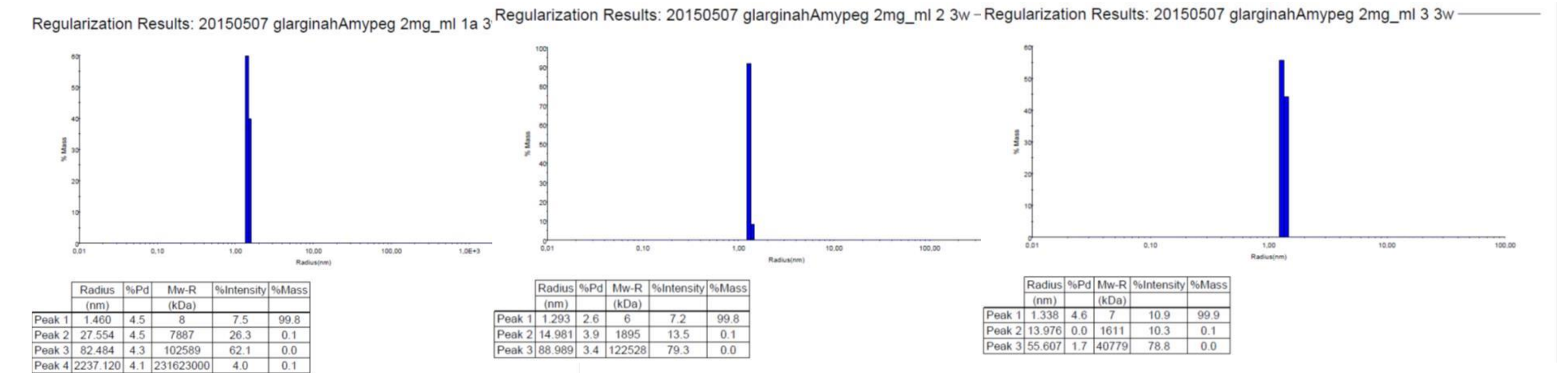


# Glargine – hAmy-PEG Time 3 weeks

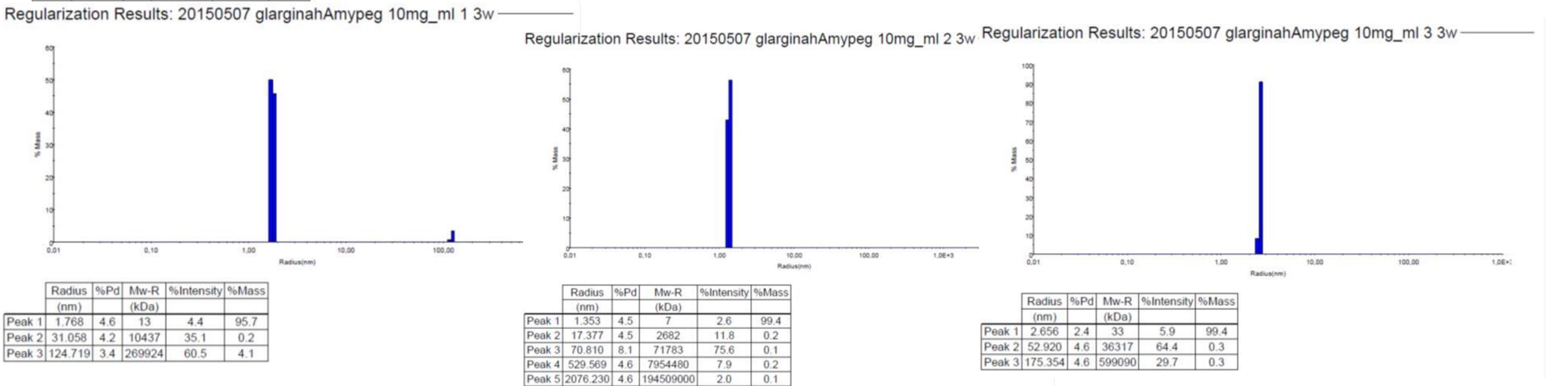
hAmypeg Ø



hAmypeg 100 µg/mL



hAmypeg 500 µg/mL

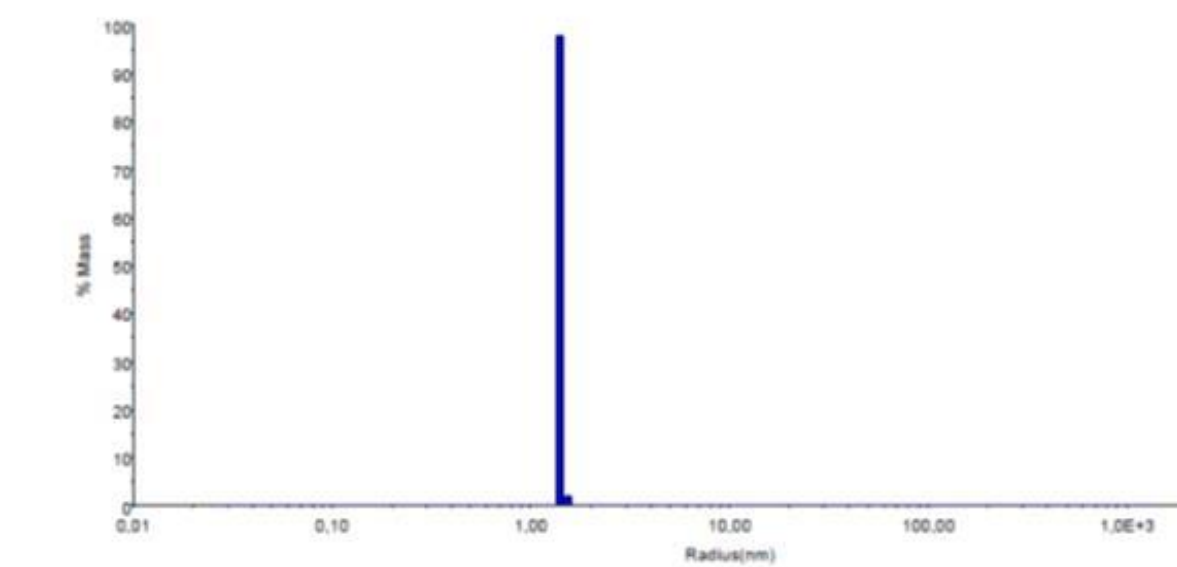




Glargine – hAmy-PEG Time 4 weeks

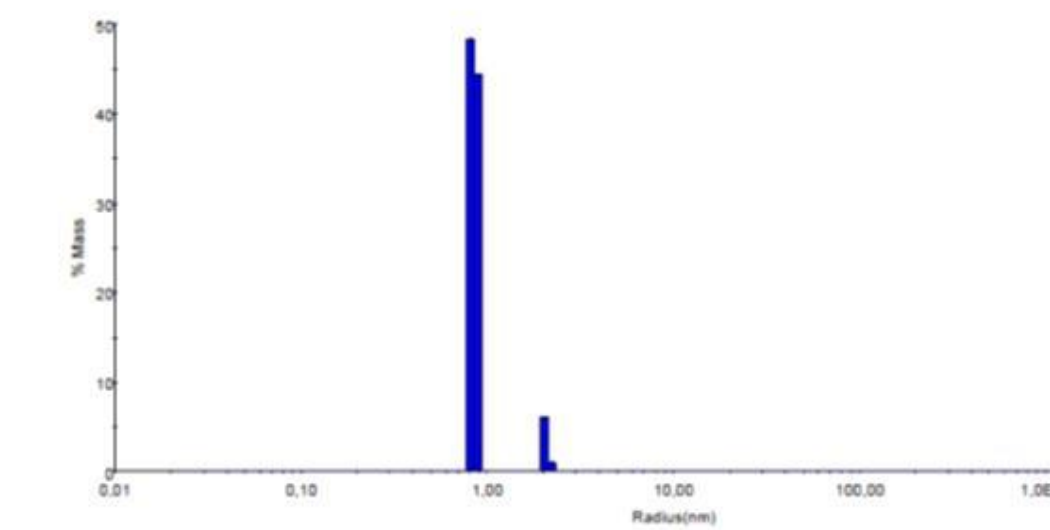
hAmypeg Ø

Regularization Results: 20150514 glargina 2 4w



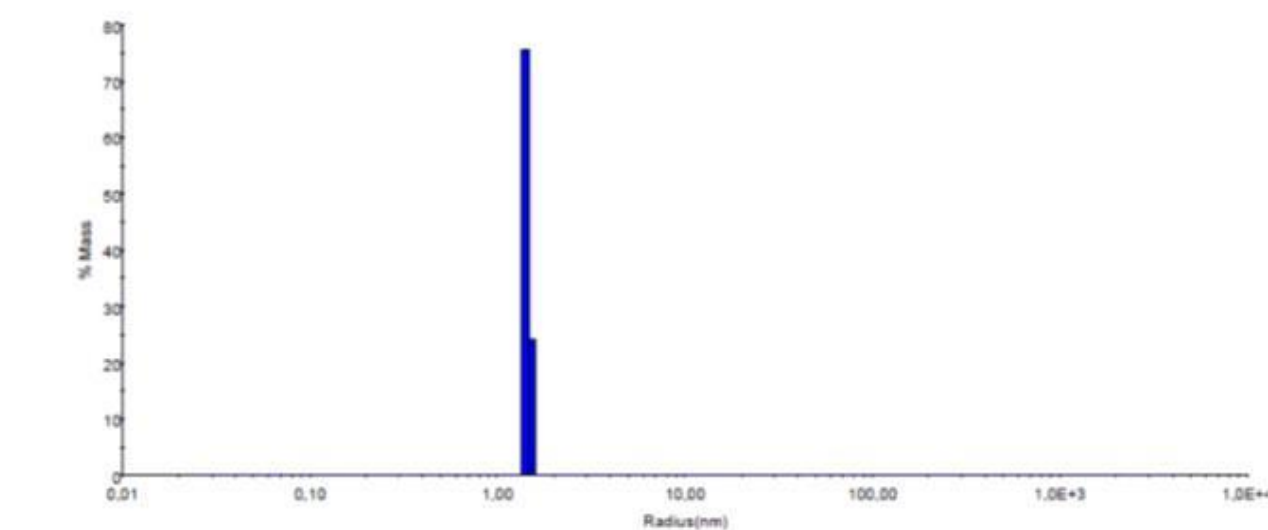
|        | Radius<br>(nm) | %Pd | Mw-R<br>(kDa) | %Intensity | %Mass |
|--------|----------------|-----|---------------|------------|-------|
| Peak 1 | 1.409          | 1.4 | 8             | 38.4       | 99.9  |
| Peak 2 | 81.724         | 3.9 | 100390        | 37.6       | 0.0   |
| Peak 3 | 1192.200       | 4.5 | 53115300      | 24.0       | 0.1   |

Regularization Results: 20150514 glargina 3 4w



|        | Radius<br>(nm) | %Pd | Mw-R<br>(kDa) | %Intensity | %Mass |
|--------|----------------|-----|---------------|------------|-------|
| Peak 1 | 0.848          | 4.6 | 2             | 20.2       | 92.8  |
| Peak 2 | 2.059          | 3.3 | 18            | 22.2       | 7.1   |
| Peak 3 | 94.990         | 3.1 | 142741        | 38.3       | 0.0   |
| Peak 4 | 1793.460       | 3.2 | 138091000     | 19.4       | 0.0   |

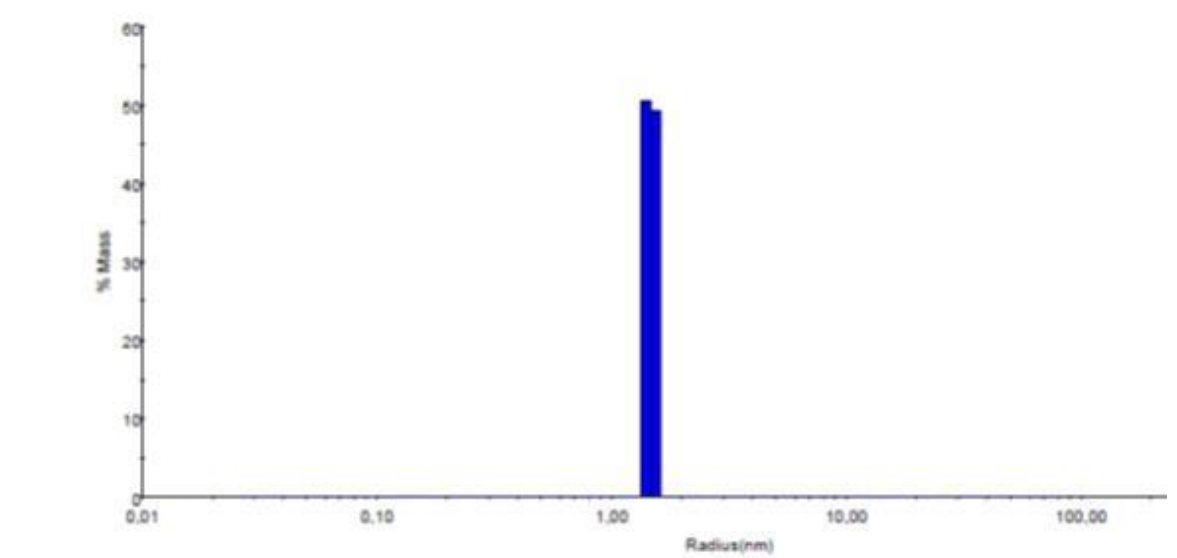
Regularization Results: 20150514 glargina 1 4w



|        | Radius<br>(nm) | %Pd | Mw-R<br>(kDa) | %Intensity | %Mass |
|--------|----------------|-----|---------------|------------|-------|
| Peak 1 | 1.439          | 4.0 | 8             | 46.8       | 99.9  |
| Peak 2 | 46.314         | 1.9 | 26584         | 29.7       | 0.0   |
| Peak 3 | 412.915        | 3.1 | 4443950       | 17.4       | 0.0   |
| Peak 4 | 3457.790       | 0.0 | 641593000     | 6.1        | 0.0   |

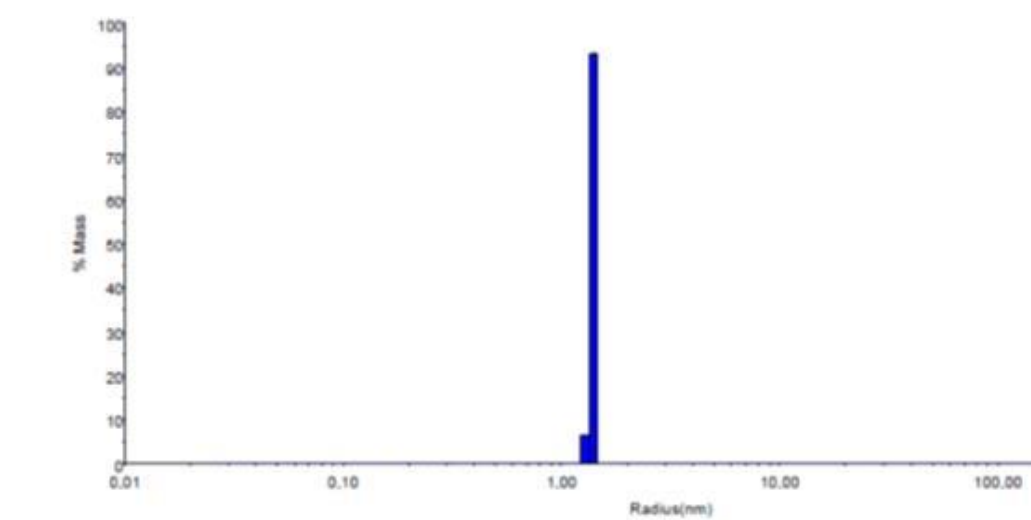
hAmypeg 100 µg/mL

Regularization Results: 20150514 glarginahAmypeg 2mg\_ml 1 4w



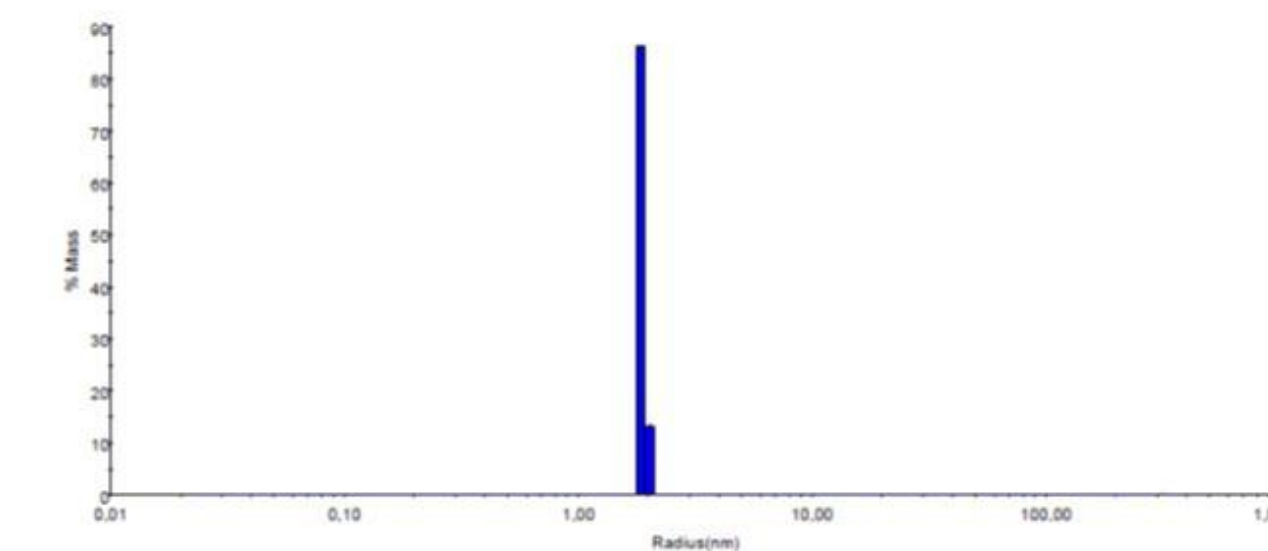
|        | Radius<br>(nm) | %Pd | Mw-R<br>(kDa) | %Intensity | %Mass |
|--------|----------------|-----|---------------|------------|-------|
| Peak 1 | 1.473          | 4.6 | 8             | 7.9        | 99.9  |
| Peak 2 | 27.371         | 4.3 | 7765          | 25.0       | 0.1   |
| Peak 3 | 87.835         | 1.0 | 118842        | 67.1       | 0.0   |

Regularization Results: 20150514 glarginahAmypeg 2mg\_ml 2



|        | Radius<br>(nm) | %Pd | Mw-R<br>(kDa) | %Intensity | %Mass |
|--------|----------------|-----|---------------|------------|-------|
| Peak 1 | 1.398          | 2.2 | 7             | 8.3        | 99.8  |
| Peak 2 | 24.964         | 4.3 | 6261          | 15.0       | 0.0   |
| Peak 3 | 60.058         | 4.4 | 48829         | 67.0       | 0.0   |
| Peak 4 | 871.850        | 0.0 | 25540200      | 9.7        | 0.1   |

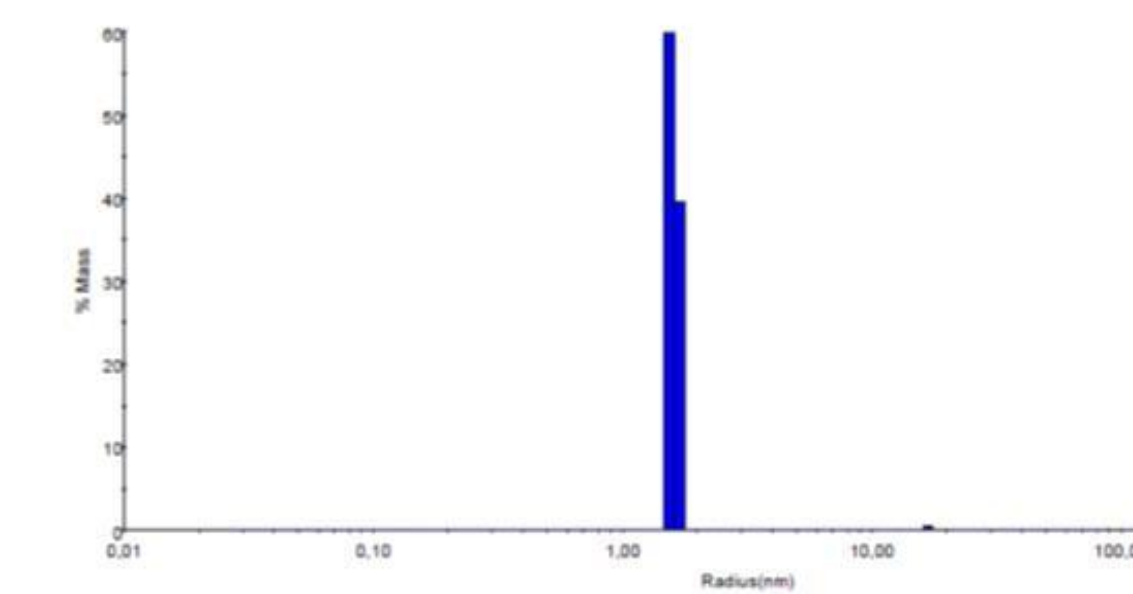
Regularization Results: 20150514 glarginahAmypeg 2mg\_ml 3 4w



|        | Radius<br>(nm) | %Pd | Mw-R<br>(kDa) | %Intensity | %Mass |
|--------|----------------|-----|---------------|------------|-------|
| Peak 1 | 1.877          | 3.2 | 15            | 10.2       | 99.7  |
| Peak 2 | 51.418         | 3.6 | 33951         | 74.8       | 0.1   |
| Peak 3 | 318.449        | 1.7 | 2419860       | 15.0       | 0.2   |

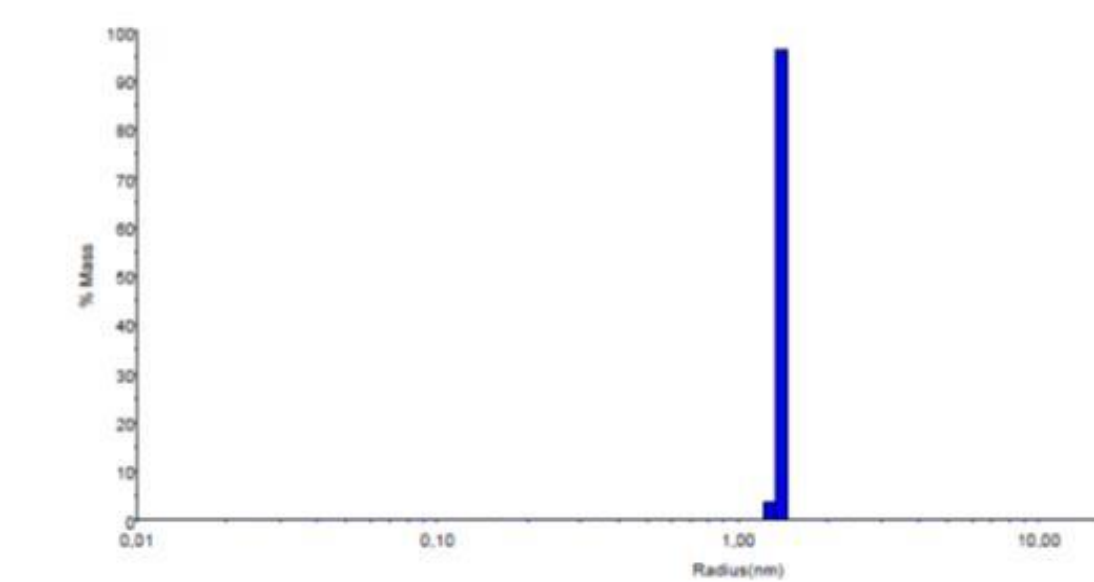
hAmypeg 500 µg/mL

Regularization Results: 20150514 glarginahAmypeg 10mg\_ml 1 4w



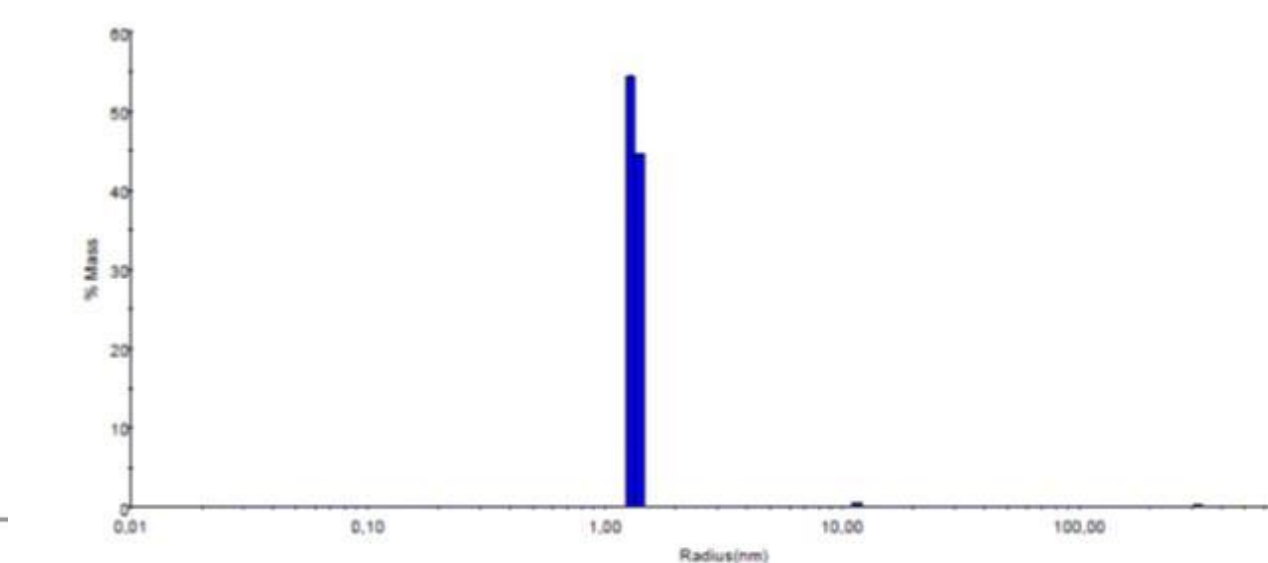
|        | Radius<br>(nm) | %Pd | Mw-R<br>(kDa) | %Intensity | %Mass |
|--------|----------------|-----|---------------|------------|-------|
| Peak 1 | 1.601          | 4.5 | 10            | 3.0        | 99.4  |
| Peak 2 | 16.897         | 2.3 | 2512          | 15.2       | 0.5   |
| Peak 3 | 89.658         | 3.9 | 124693        | 81.7       | 0.2   |

Regularization Results: 20150514 glarginahAmypeg 10mg\_ml 2



|        | Radius<br>(nm) | %Pd | Mw-R<br>(kDa) | %Intensity | %Mass |
|--------|----------------|-----|---------------|------------|-------|
| Peak 1 | 1.402          | 1.6 | 7             | 2.9        | 99.7  |
| Peak 2 | 23.203         | 4.6 | 5275          | 16.4       | 0.1   |
| Peak 3 | 86.369         | 3.4 | 114252        | 80.7       | 0.1   |

Regularization Results: 20150514 glarginahAmypeg 10mg\_ml 3 4w

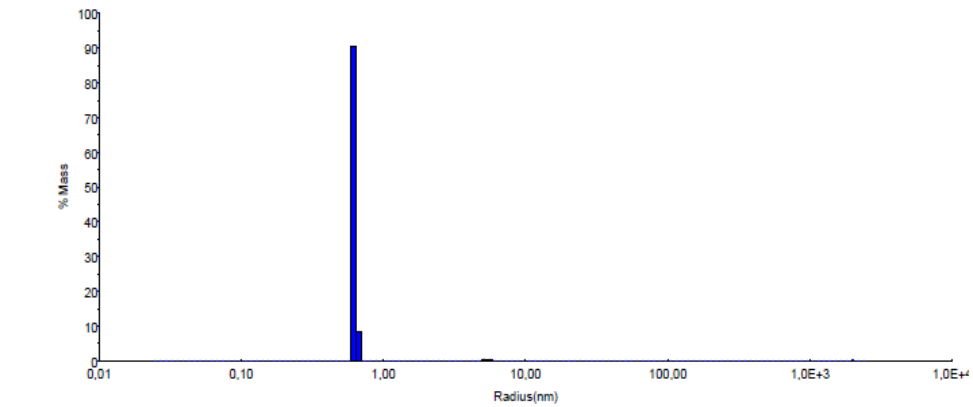


|        | Radius<br>(nm) | %Pd | Mw-R<br>(kDa) | %Intensity | %Mass |
|--------|----------------|-----|---------------|------------|-------|
| Peak 1 | 1.338          | 4.6 | 7             | 2.1        | 99.1  |
| Peak 2 | 11.708         | 2.4 | 1065          | 7.4        | 0.5   |
| Peak 3 | 61.596         | 3.3 | 51806         | 79.0       | 0.1   |
| Peak 4 | 319.020        | 2.1 | 2430030       | 11.5       | 0.3   |

# Glargine – hAmy-PEG Time 2 months

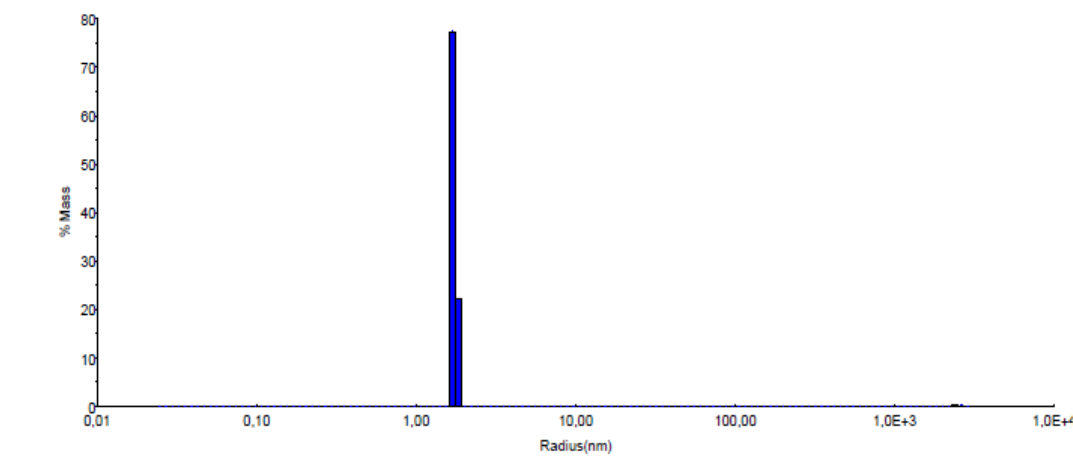
hAmypeg Ø

Regularization Results: 20150615 glargina 2 2m



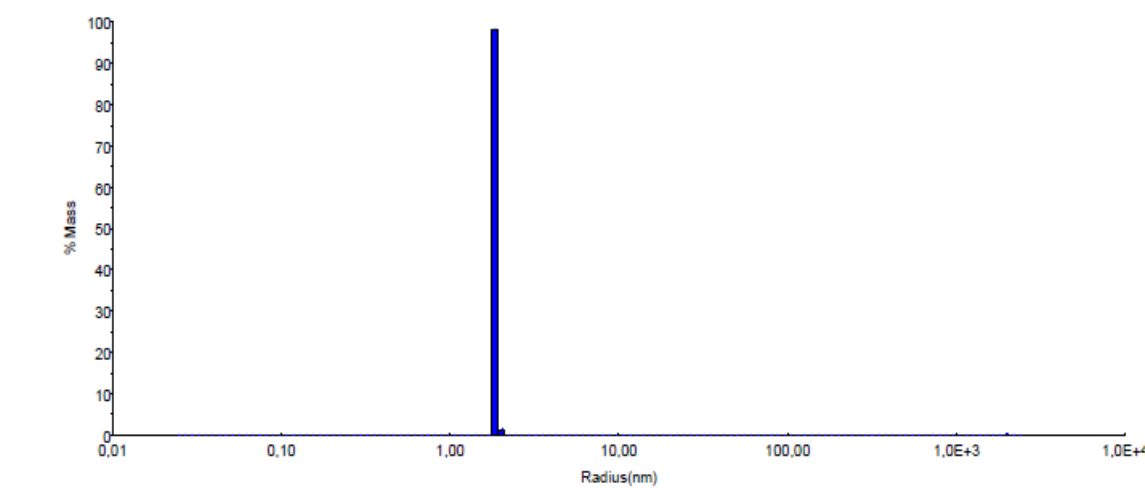
|        | Radius<br>(nm) | %Pd | Mw-R<br>(kDa) | %Intensity | %Mass |
|--------|----------------|-----|---------------|------------|-------|
| Peak 1 | 0.620          | 2.7 | 1             | 4.0        | 99.0  |
| Peak 2 | 5.309          | 4.6 | 167           | 21.3       | 0.8   |
| Peak 3 | 60.760         | 0.0 | 50175         | 32.3       | 0.0   |
| Peak 4 | 2021.940       | 3.4 | 182817000     | 42.4       | 0.2   |

Regularization Results: 20150615 glargina 1 2m



|        | Radius<br>(nm) | %Pd | Mw-R<br>(kDa) | %Intensity | %Mass |
|--------|----------------|-----|---------------|------------|-------|
| Peak 1 | 1.726          | 3.9 | 12            | 31.7       | 99.6  |
| Peak 2 | 31.513         | 3.2 | 10798         | 40.6       | 0.0   |
| Peak 3 | 200.537        | 0.0 | 820074        | 4.6        | 0.0   |
| Peak 4 | 2457.180       | 4.2 | 288484000     | 23.0       | 0.3   |

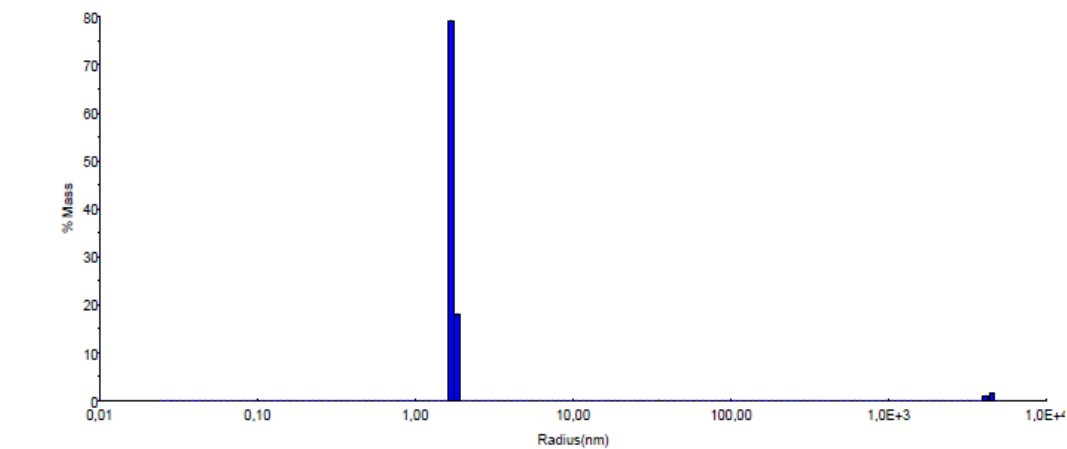
Regularization Results: 20150615 glargina 3 2m



|        | Radius<br>(nm) | %Pd | Mw-R<br>(kDa) | %Intensity | %Mass |
|--------|----------------|-----|---------------|------------|-------|
| Peak 1 | 1.855          | 1.1 | 14            | 29.7       | 99.8  |
| Peak 2 | 48.840         | 4.4 | 30101         | 57.1       | 0.0   |
| Peak 3 | 2025.910       | 3.6 | 183658000     | 13.2       | 0.2   |

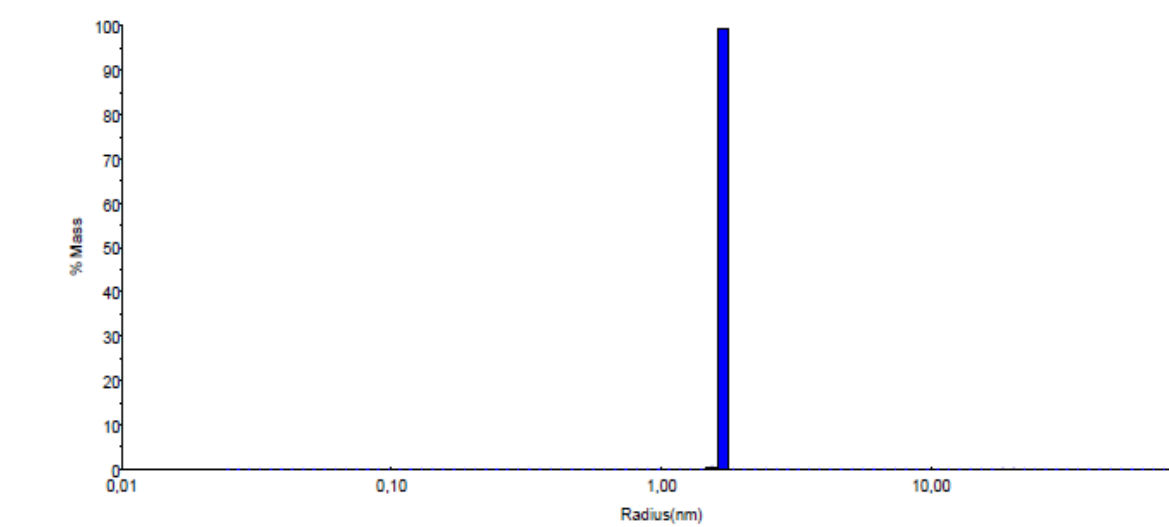
hAmypeg 100 µg/mL

Regularization Results: 21050615 glarhAmypeg 2mg\_ml 1 2m



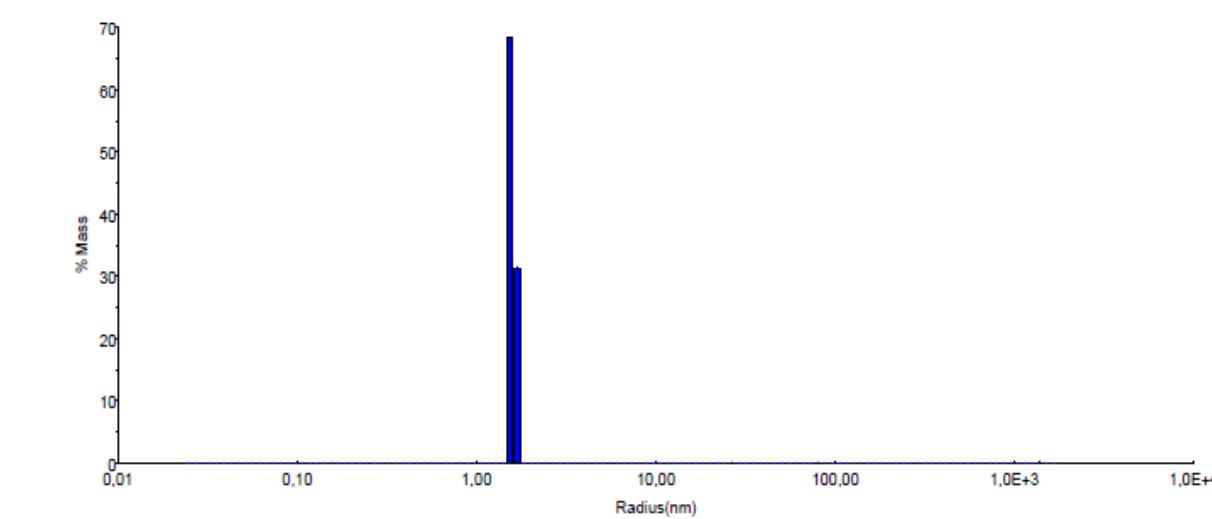
|        | Radius<br>(nm) | %Pd | Mw-R<br>(kDa) | %Intensity | %Mass |
|--------|----------------|-----|---------------|------------|-------|
| Peak 1 | 1.720          | 3.7 | 12            | 10.2       | 97.4  |
| Peak 2 | 35.589         | 3.6 | 14353         | 58.3       | 0.1   |
| Peak 3 | 4392.920       | 4.5 | 1123290000    | 31.6       | 2.5   |

Regularization Results: 20150615 glarmypeg 2mg\_ml 1 2m



|        | Radius<br>(nm) | %Pd | Mw-R<br>(kDa) | %Intensity | %Mass |
|--------|----------------|-----|---------------|------------|-------|
| Peak 1 | 1.689          | 0.6 | 11            | 9.1        | 99.8  |
| Peak 2 | 19.523         | 4.4 | 3522          | 13.3       | 0.1   |
| Peak 3 | 64.348         | 4.4 | 57384         | 77.6       | 0.0   |

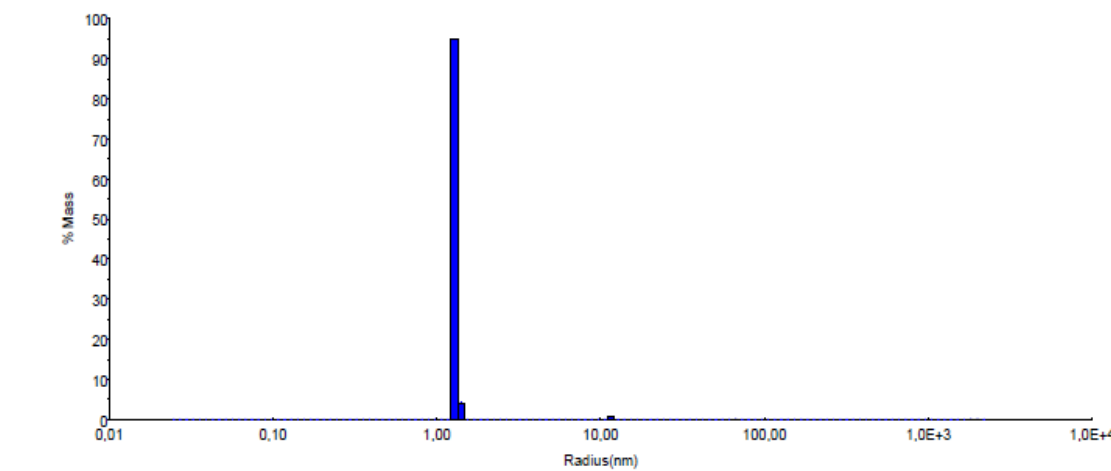
Regularization Results: 20150615 glarmypeg 2mg\_ml 1 2m



|        | Radius<br>(nm) | %Pd | Mw-R<br>(kDa) | %Intensity | %Mass |
|--------|----------------|-----|---------------|------------|-------|
| Peak 1 | 1.588          | 4.3 | 10            | 9.8        | 99.8  |
| Peak 2 | 26.314         | 2.8 | 7081          | 26.2       | 0.1   |
| Peak 3 | 80.037         | 0.0 | 95609         | 58.3       | 0.0   |
| Peak 4 | 1380.360       | 0.5 | 74840200      | 5.7        | 0.1   |

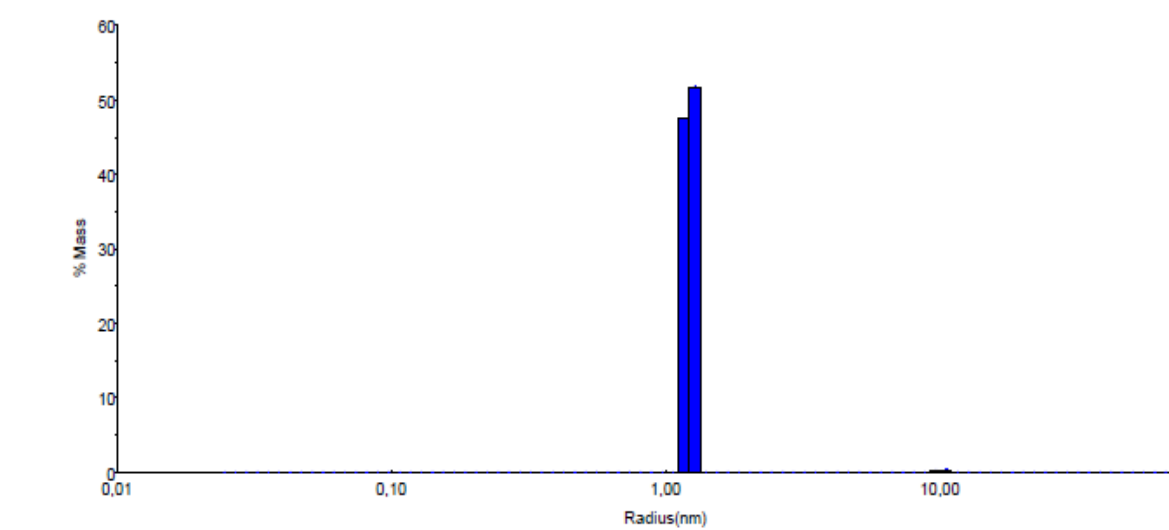
hAmypeg 500 µg/mL

Regularization Results: 21050615 glarhAmypeg 10mg\_ml 1 2m



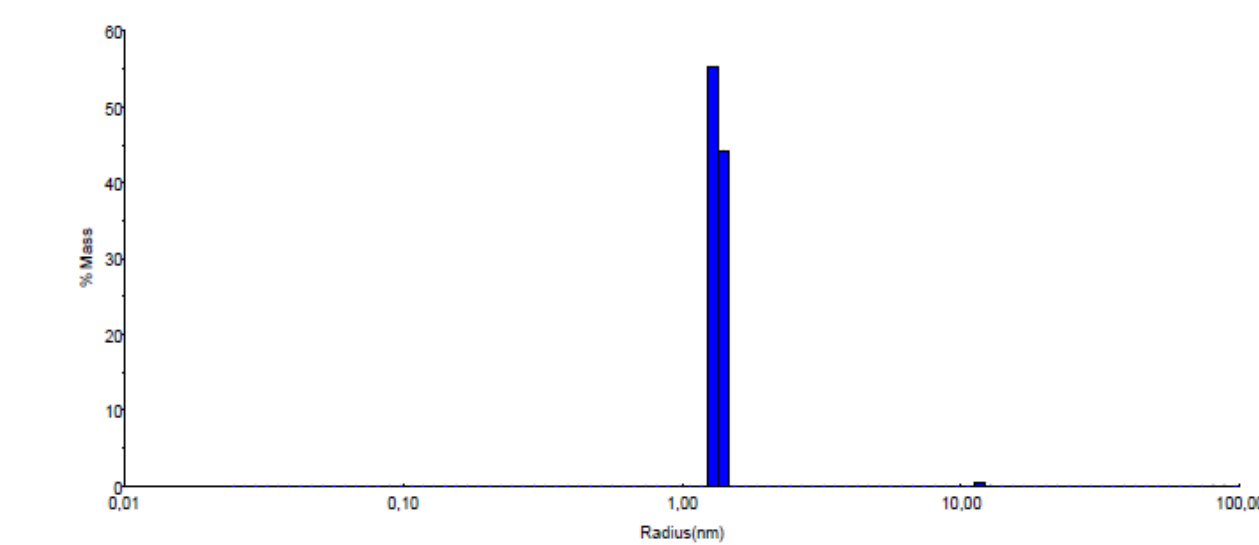
|        | Radius<br>(nm) | %Pd | Mw-R<br>(kDa) | %Intensity | %Mass |
|--------|----------------|-----|---------------|------------|-------|
| Peak 1 | 1.288          | 1.9 | 6             | 2.7        | 99.1  |
| Peak 2 | 11.630         | 0.0 | 1048          | 12.3       | 0.6   |
| Peak 3 | 64.749         | 4.2 | 58223         | 81.8       | 0.1   |
| Peak 4 | 1899.340       | 4.6 | 157926000     | 3.2        | 0.2   |

Regularization Results: 21050615 glarhAmypeg 10mg\_ml 1 2m



|        | Radius<br>(nm) | %Pd | Mw-R<br>(kDa) | %Intensity | %Mass |
|--------|----------------|-----|---------------|------------|-------|
| Peak 1 | 1.229          | 4.6 | 5             | 3.7        | 99.4  |
| Peak 2 | 10.254         | 4.4 | 781           | 12.2       | 0.6   |
| Peak 3 | 86.643         | 3.1 | 115104        | 84.0       | 0.1   |

Regularization Results: 21050615 glarhAmypeg 10mg\_ml 2 2m

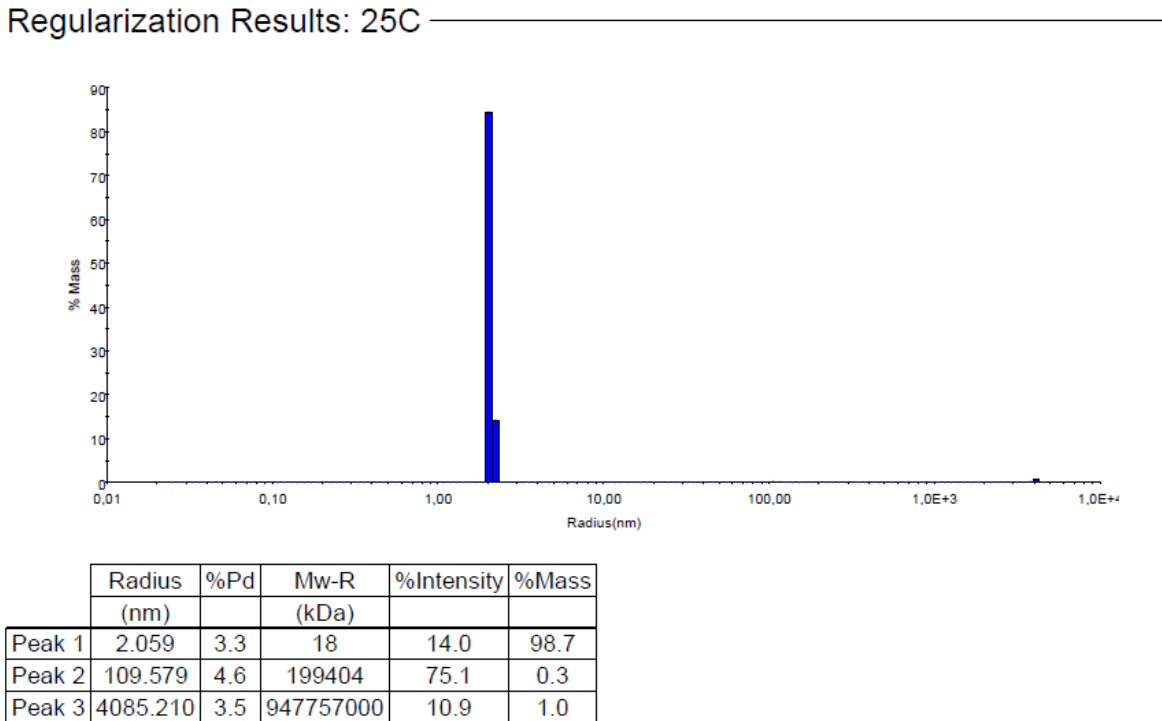
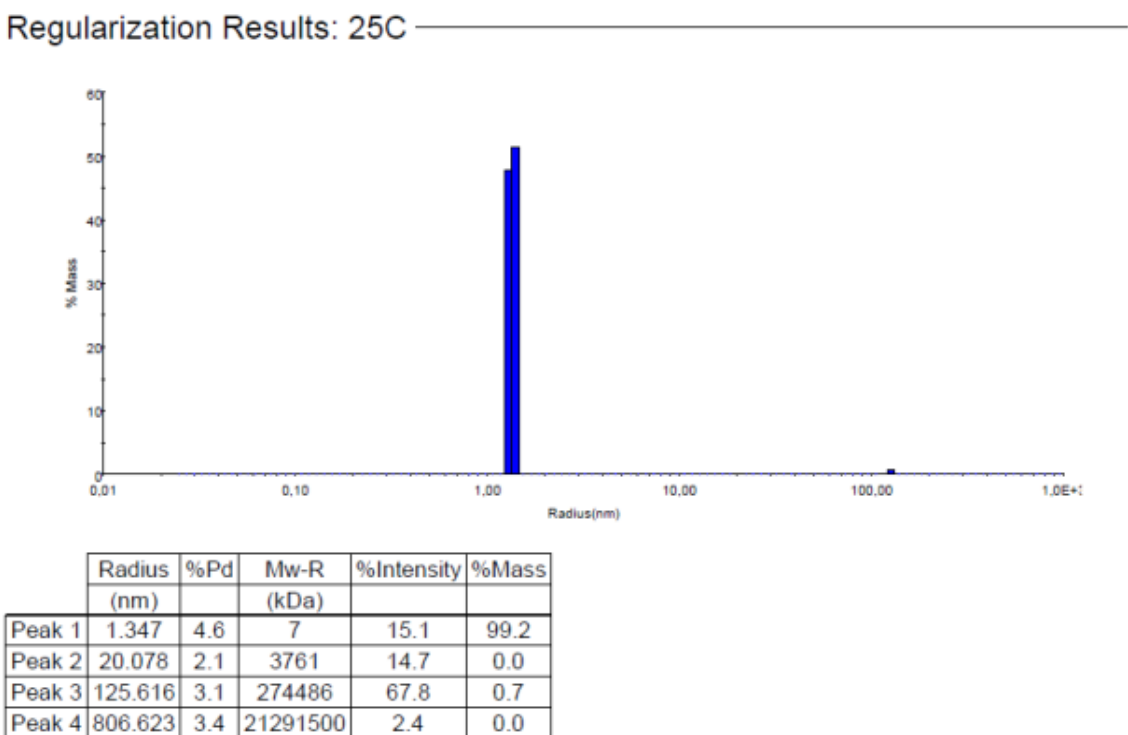
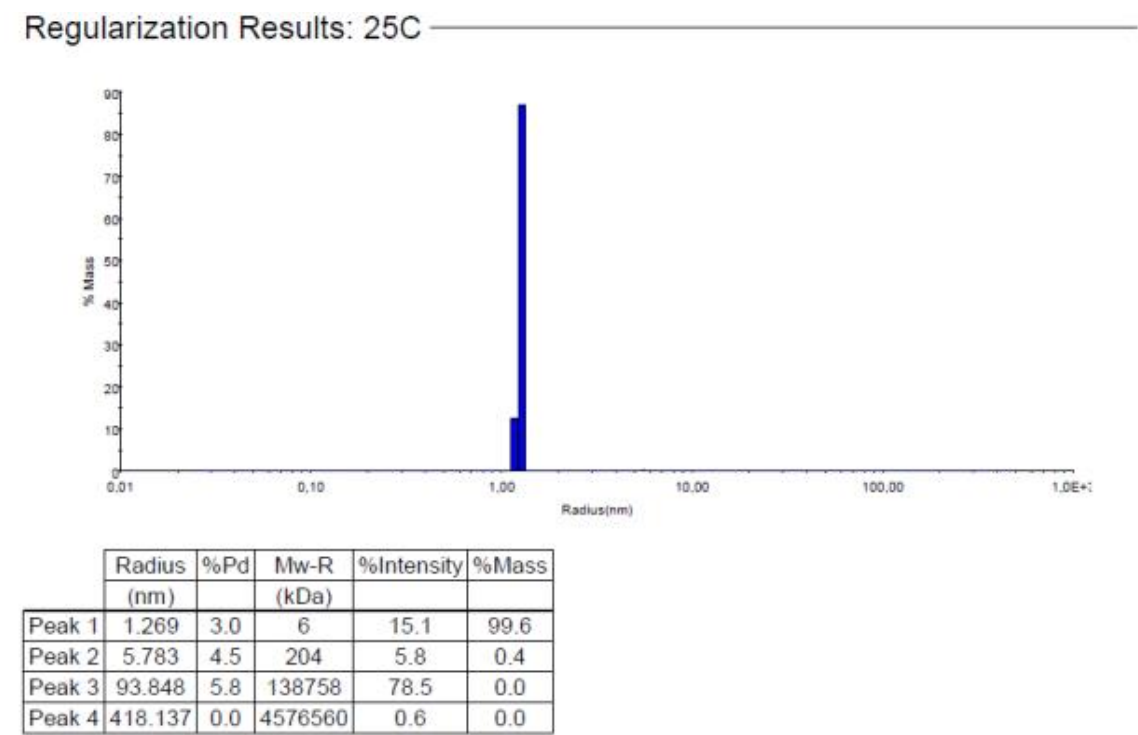


|        | Radius<br>(nm) | %Pd | Mw-R<br>(kDa) | %Intensity | %Mass |
|--------|----------------|-----|---------------|------------|-------|
| Peak 1 | 1.338          | 4.6 | 7             | 3.3        | 99.4  |
| Peak 2 | 11.750         | 2.9 | 1074          | 11.1       | 0.5   |
| Peak 3 | 83.288         | 4.6 | 104944        | 85.5       | 0.1   |

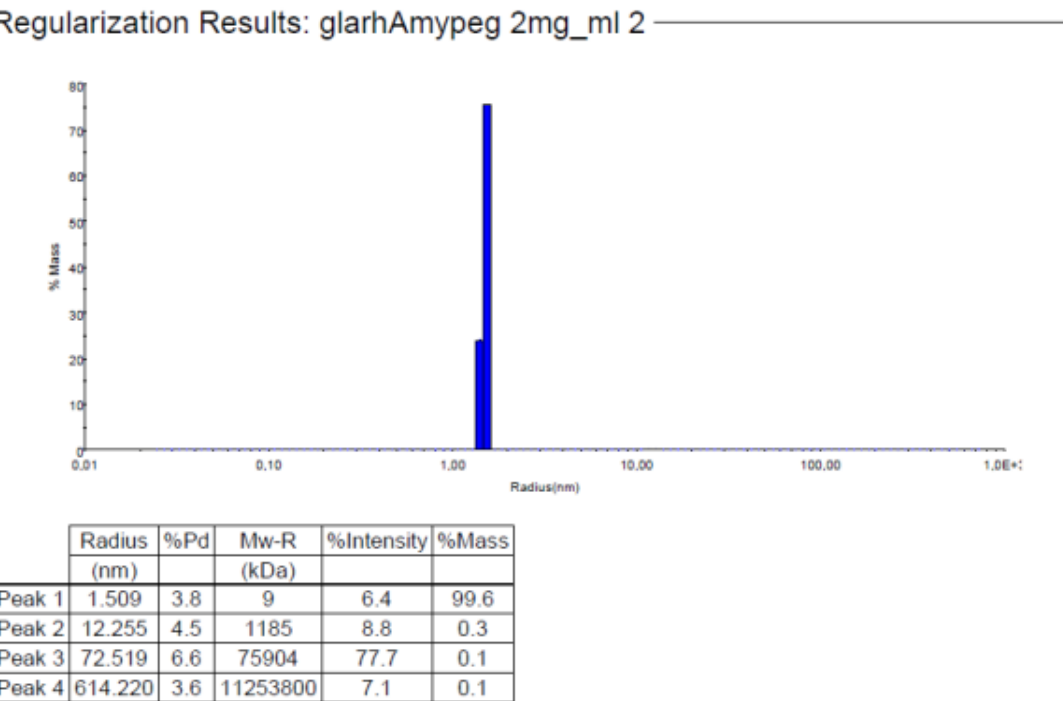
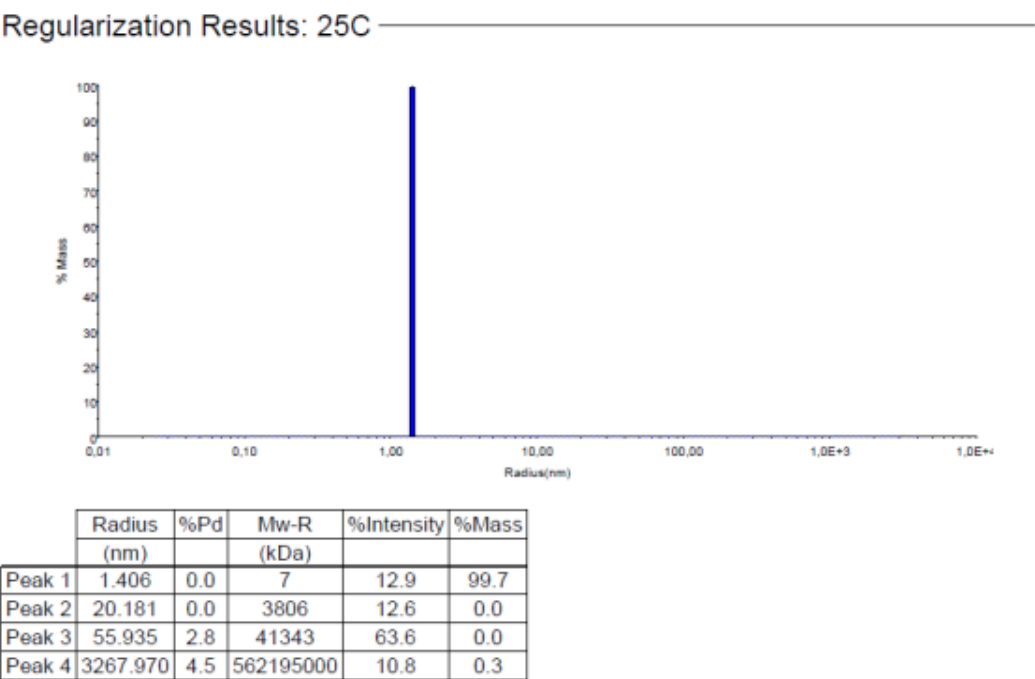
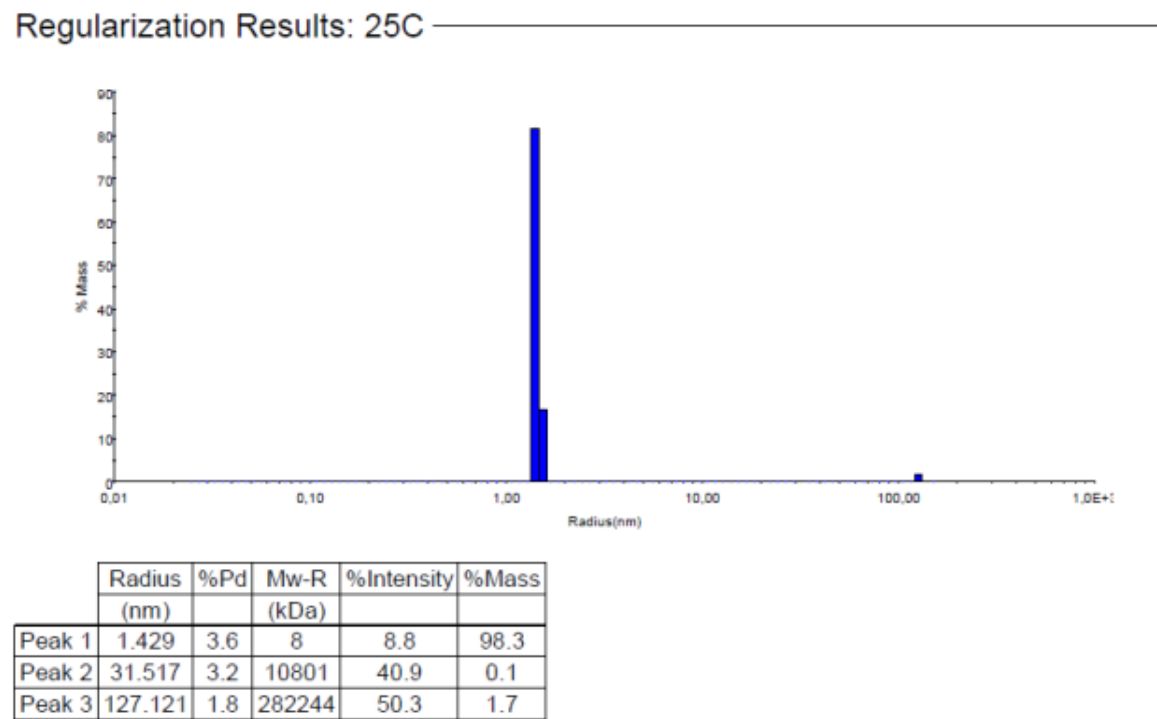


# Glargine – hAmy-PEG Time 3 months

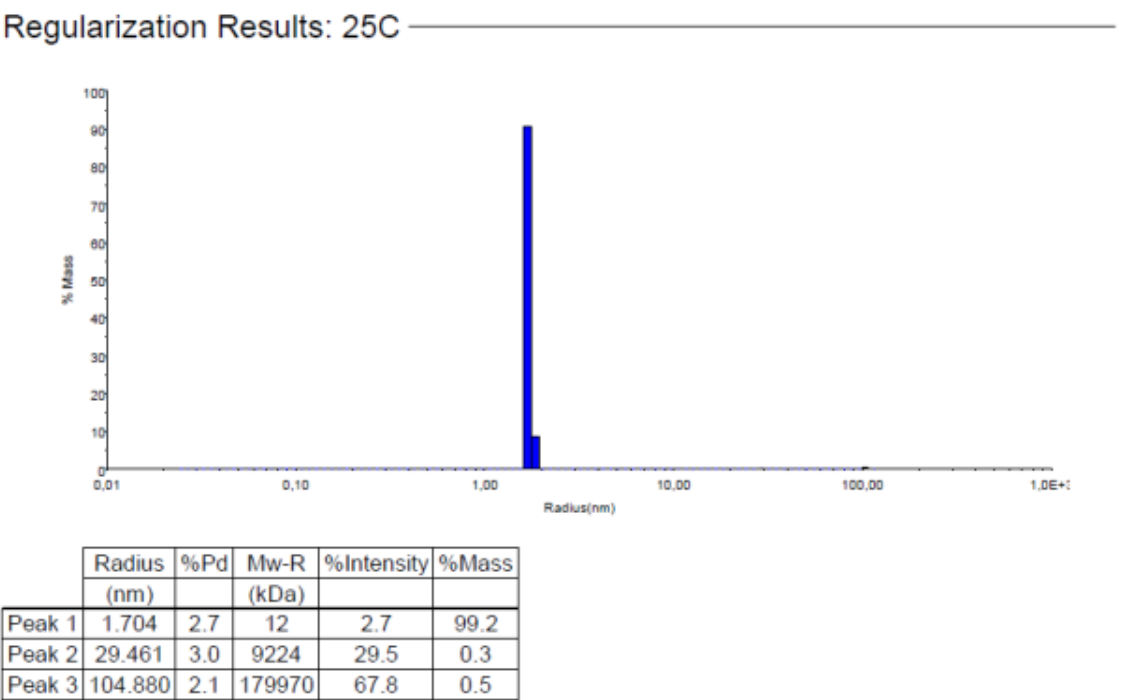
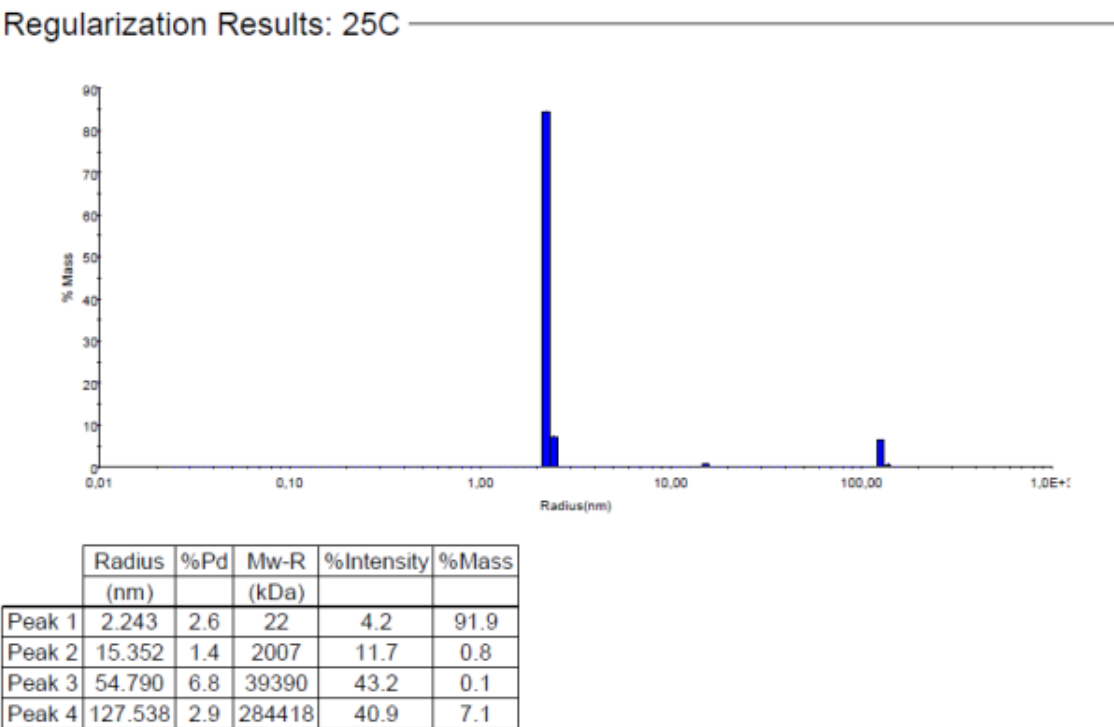
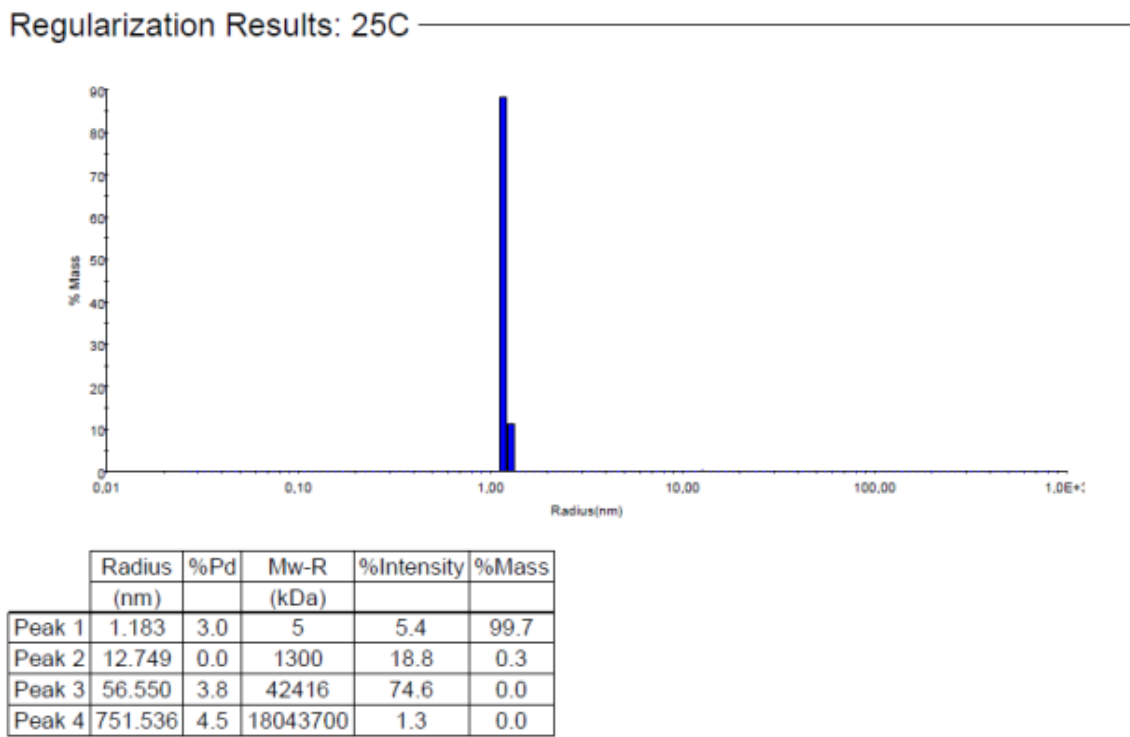
hAmypeg Ø



hAmypeg 100 µg/mL

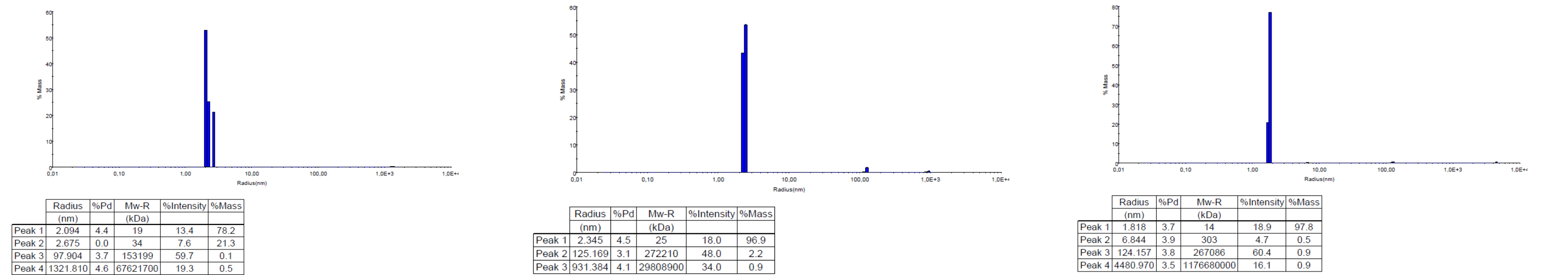


hAmypeg 500 µg/mL

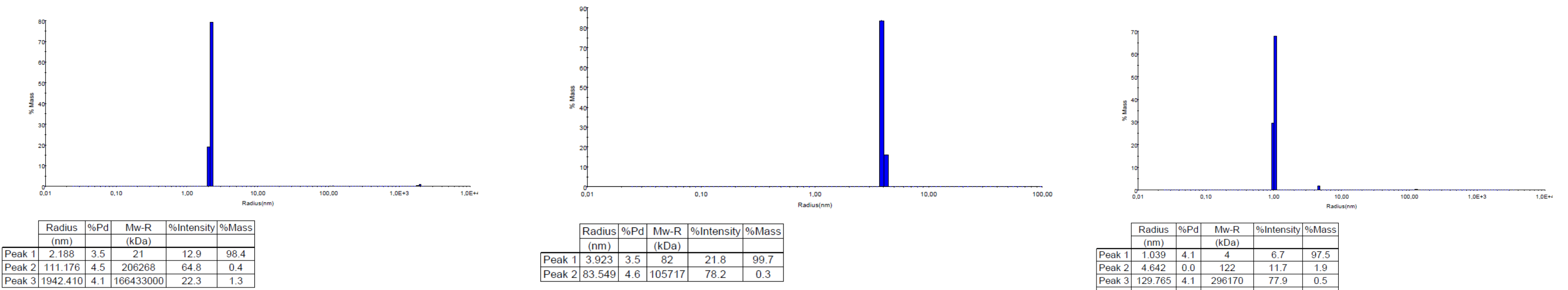


Glargine – hAmy-PEG Time 6 months

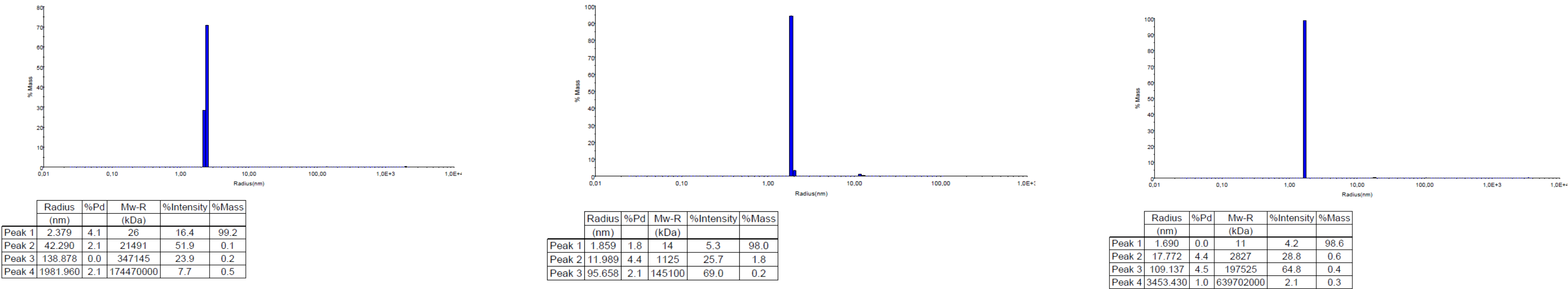
hAmypeg Ø



hAmypeg 100 µg/mL



hAmypeg 500 µg/mL





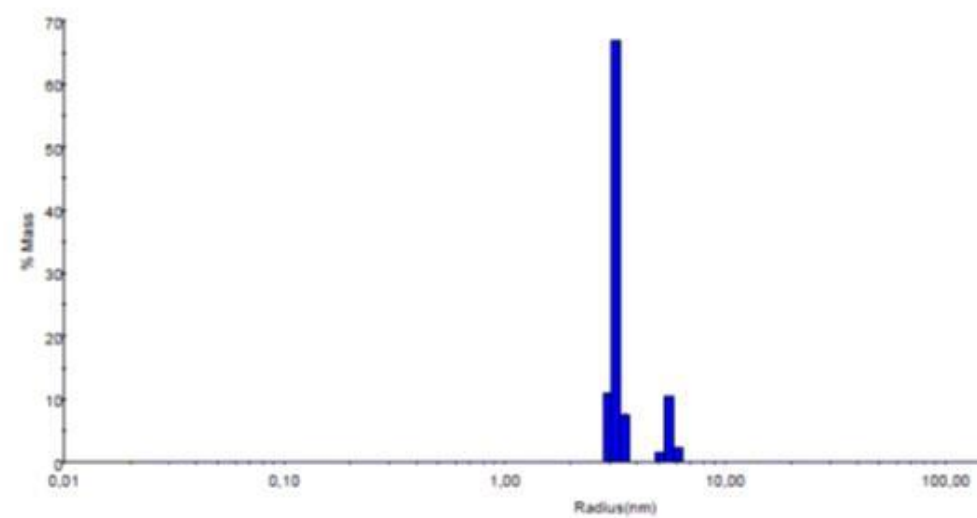
# **Detemir Insulin : Human PEGylated Amylin** *raw data*

Detemir Insulin (95 U/mL)  
+ hAmylin-PEGsc5k  
0.1 mg/mL or 0.5 mg/mL

# Detemir – hAmy-PEG Time 0

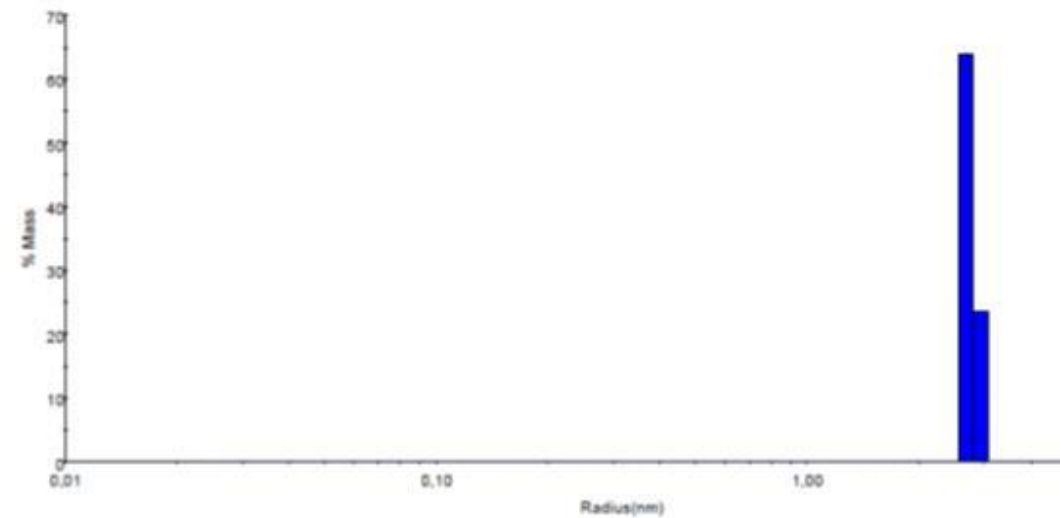
hAmypeg Ø

Regularization Results: detemir t0



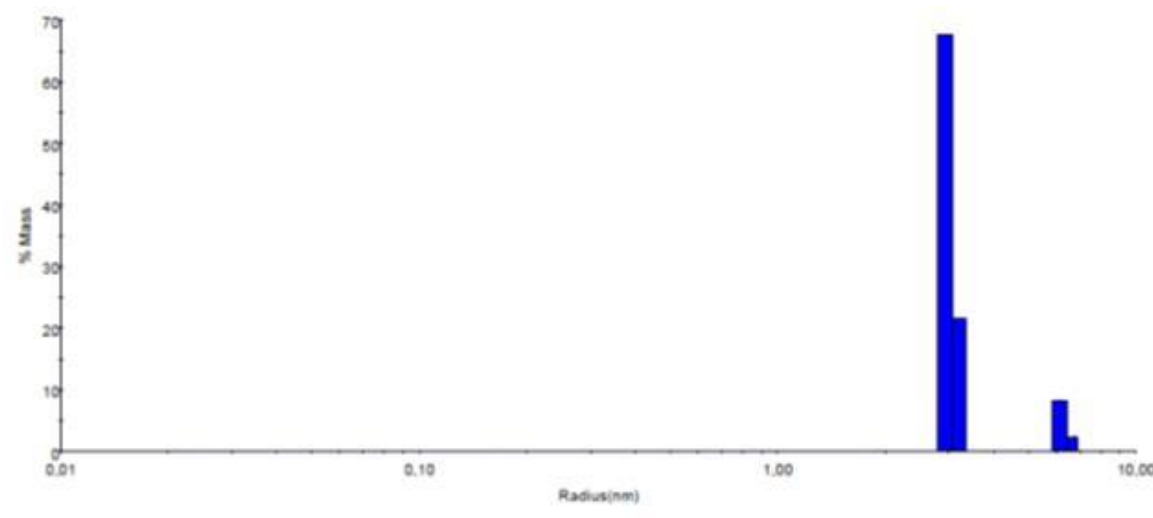
|        | Radius<br>(nm) | %Pd | Mw-R<br>(kDa) | %Intensity | %Mass |
|--------|----------------|-----|---------------|------------|-------|
| Peak 1 | 3.206          | 4.3 | 51            | 51.9       | 85.6  |
| Peak 2 | 5.613          | 4.8 | 191           | 46.6       | 14.4  |
| Peak 3 | 575.706        | 4.6 | 9671570       | 1.5        | 0.0   |

Regularization Results: detemir t0



|        | Radius<br>(nm) | %Pd | Mw-R<br>(kDa) | %Intensity | %Mass |
|--------|----------------|-----|---------------|------------|-------|
| Peak 1 | 2.744          | 4.2 | 36            | 41.0       | 87.6  |
| Peak 2 | 5.955          | 4.1 | 219           | 59.0       | 12.4  |

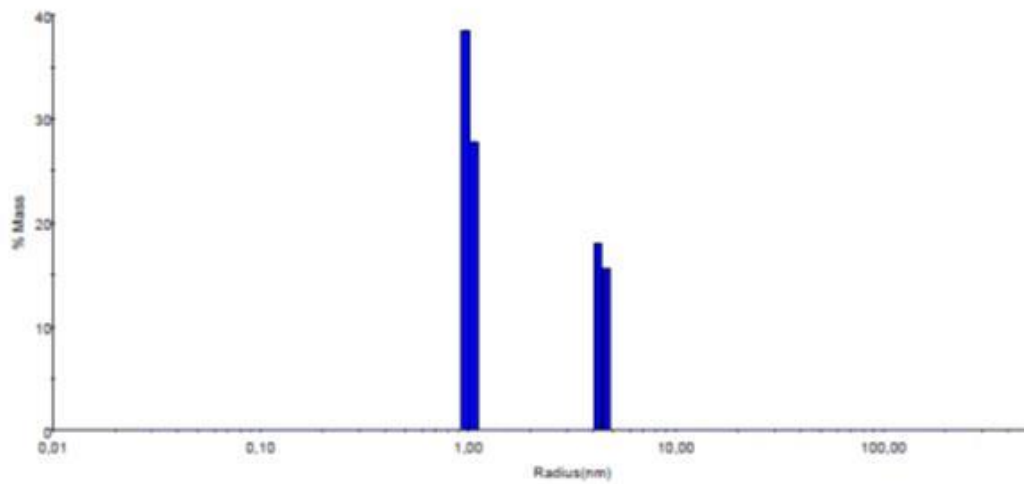
Regularization Results: detemir t0



|        | Radius<br>(nm) | %Pd | Mw-R<br>(kDa) | %Intensity | %Mass |
|--------|----------------|-----|---------------|------------|-------|
| Peak 1 | 3.001          | 4.0 | 44            | 48.0       | 89.2  |
| Peak 2 | 6.249          | 4.0 | 245           | 52.0       | 10.8  |

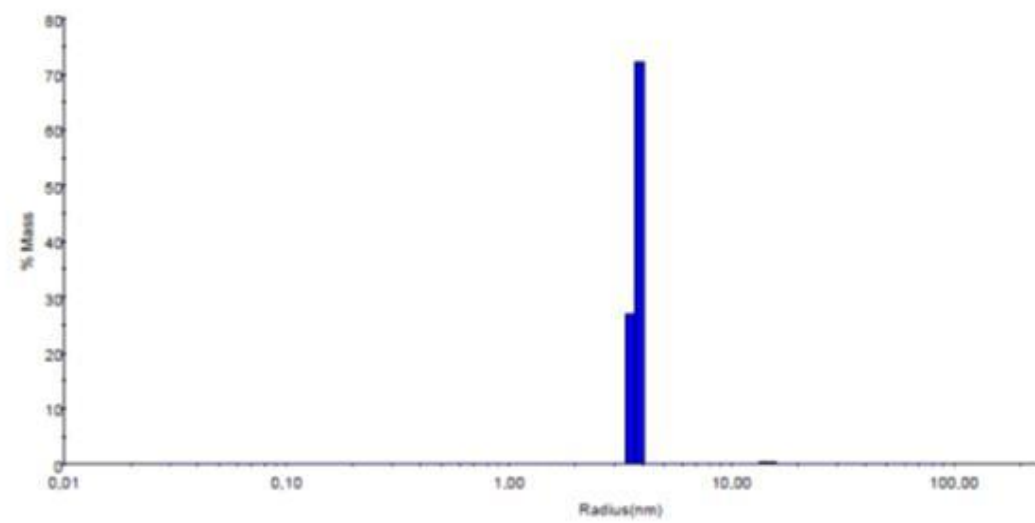
hAmypeg 100 µg/mL

Regularization Results: detemirhAmypeg 2mg\_ml 1 t0



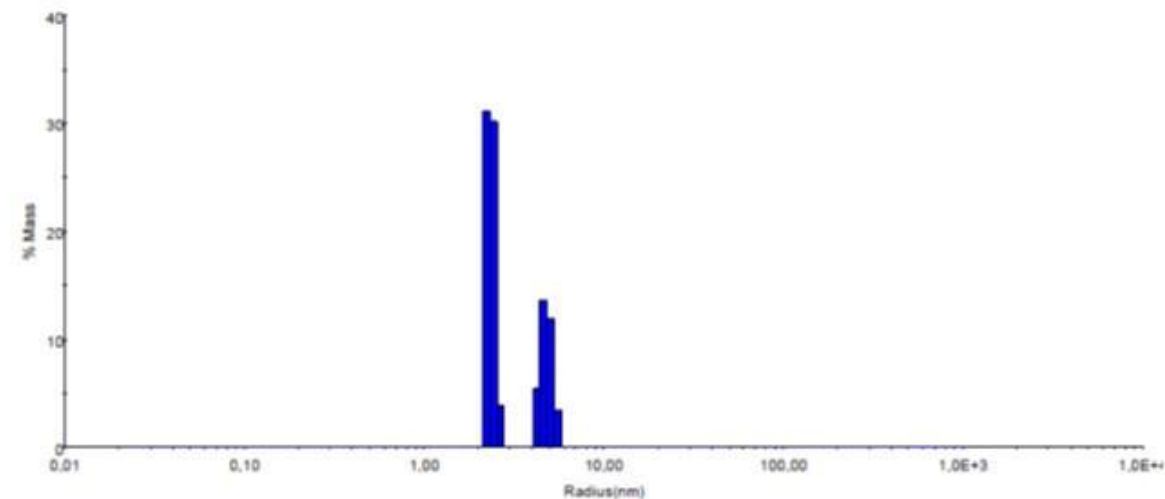
|        | Radius<br>(nm) | %Pd | Mw-R<br>(kDa) | %Intensity | %Mass |
|--------|----------------|-----|---------------|------------|-------|
| Peak 1 | 1.013          | 4.6 | 3             | 1.3        | 66.4  |
| Peak 2 | 4.424          | 4.6 | 109           | 54.0       | 33.5  |
| Peak 3 | 47.093         | 5.7 | 27642         | 32.7       | 0.0   |
| Peak 4 | 263.516        | 1.4 | 1553760       | 12.1       | 0.0   |

Regularization Results: detemirhAmypeg 2mg\_ml 2 t0



|        | Radius<br>(nm) | %Pd | Mw-R<br>(kDa) | %Intensity | %Mass |
|--------|----------------|-----|---------------|------------|-------|
| Peak 1 | 3.770          | 4.0 | 75            | 47.0       | 99.1  |
| Peak 2 | 14.565         | 4.6 | 1775          | 18.7       | 0.7   |
| Peak 3 | 102.626        | 4.1 | 171047        | 34.3       | 0.1   |

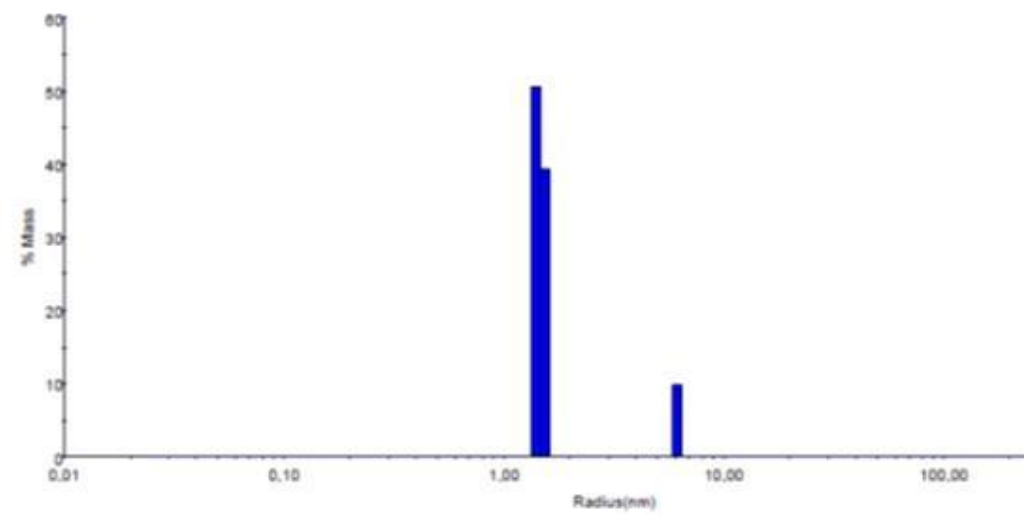
Regularization Results: detemirhAmypeg 2mg\_ml 3 t0



|        | Radius<br>(nm) | %Pd | Mw-R<br>(kDa) | %Intensity | %Mass |
|--------|----------------|-----|---------------|------------|-------|
| Peak 1 | 2.352          | 5.6 | 25            | 10.9       | 65.4  |
| Peak 2 | 4.825          | 8.0 | 134           | 49.8       | 34.5  |
| Peak 3 | 53.264         | 4.5 | 36871         | 37.3       | 0.0   |

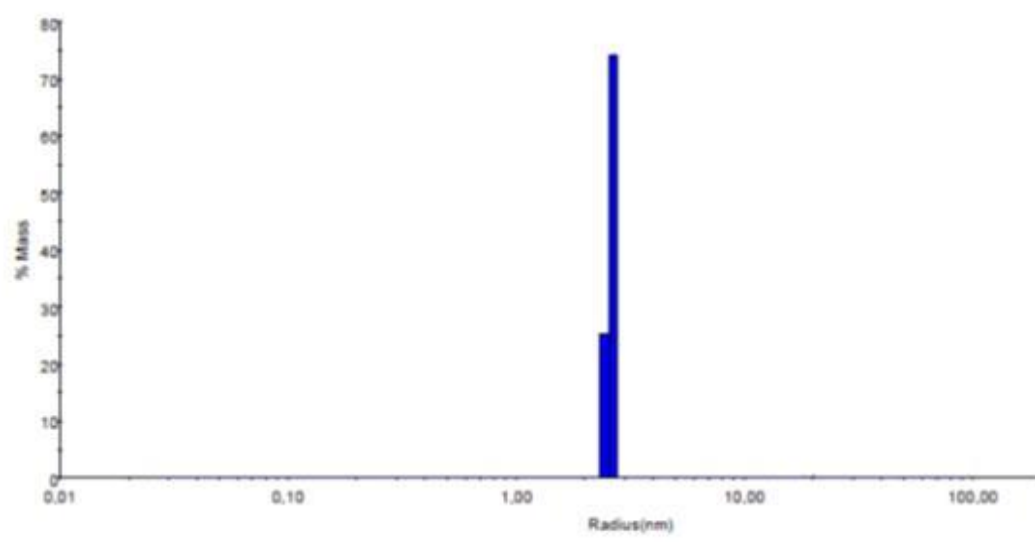
hAmypeg 500 µg/mL

Regularization Results: detemirhAmypeg 10mg\_ml 1 t0



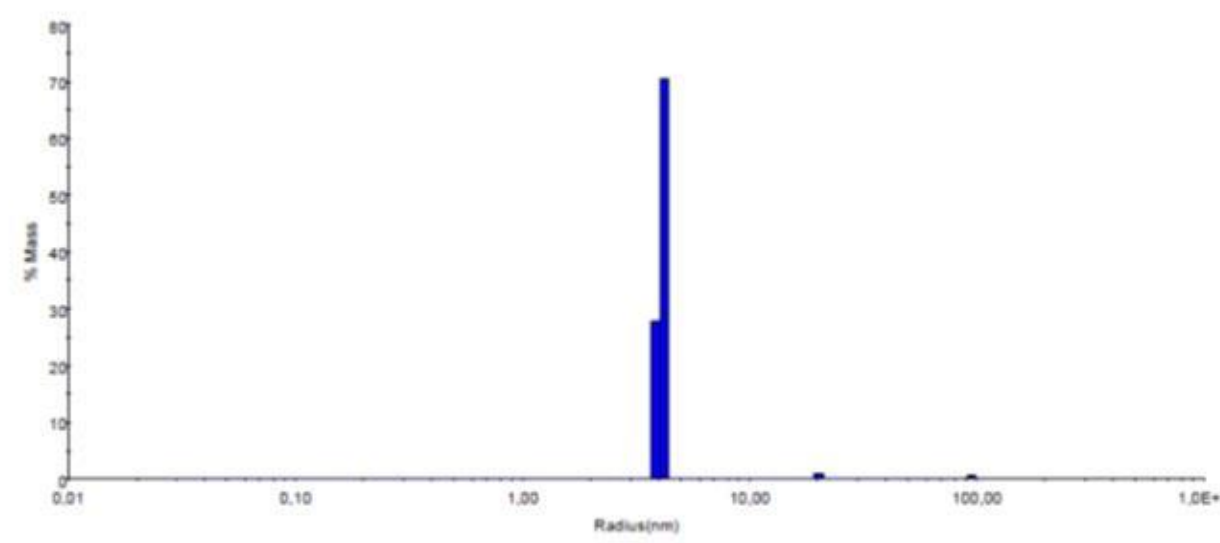
|        | Radius<br>(nm) | %Pd | Mw-R<br>(kDa) | %Intensity | %Mass |
|--------|----------------|-----|---------------|------------|-------|
| Peak 1 | 1.466          | 4.6 | 8             | 2.7        | 89.9  |
| Peak 2 | 6.114          | 0.0 | 233           | 21.4       | 9.9   |
| Peak 3 | 68.292         | 4.1 | 65953         | 60.3       | 0.1   |
| Peak 4 | 340.626        | 3.8 | 2832700       | 15.6       | 0.1   |

Regularization Results: detemirhAmypeg 10mg\_ml 2 t0



|        | Radius<br>(nm) | %Pd | Mw-R<br>(kDa) | %Intensity | %Mass |
|--------|----------------|-----|---------------|------------|-------|
| Peak 1 | 2.616          | 3.9 | 32            | 18.2       | 99.5  |
| Peak 2 | 19.382         | 4.5 | 3463          | 26.9       | 0.4   |
| Peak 3 | 96.177         | 0.0 | 146949        | 54.9       | 0.1   |

Regularization Results: detemirhAmypeg 10mg\_ml 3 t0

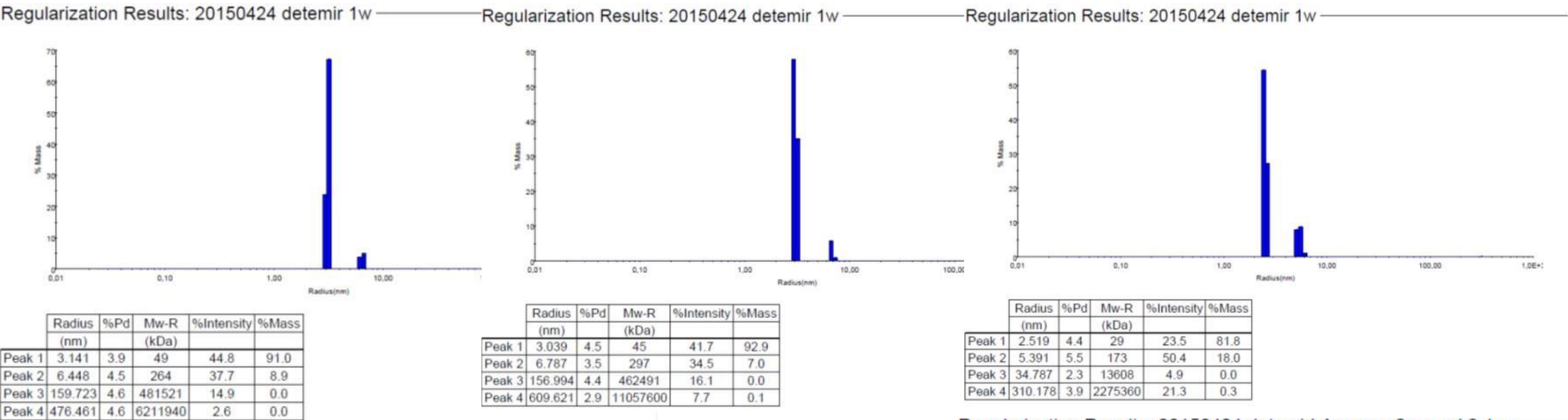


|        | Radius<br>(nm) | %Pd | Mw-R<br>(kDa) | %Intensity | %Mass |
|--------|----------------|-----|---------------|------------|-------|
| Peak 1 | 4.129          | 4.1 | 93            | 14.0       | 98.3  |
| Peak 2 | 20.172         | 0.6 | 3802          | 13.2       | 0.9   |
| Peak 3 | 95.274         | 2.7 | 143743        | 72.9       | 0.8   |

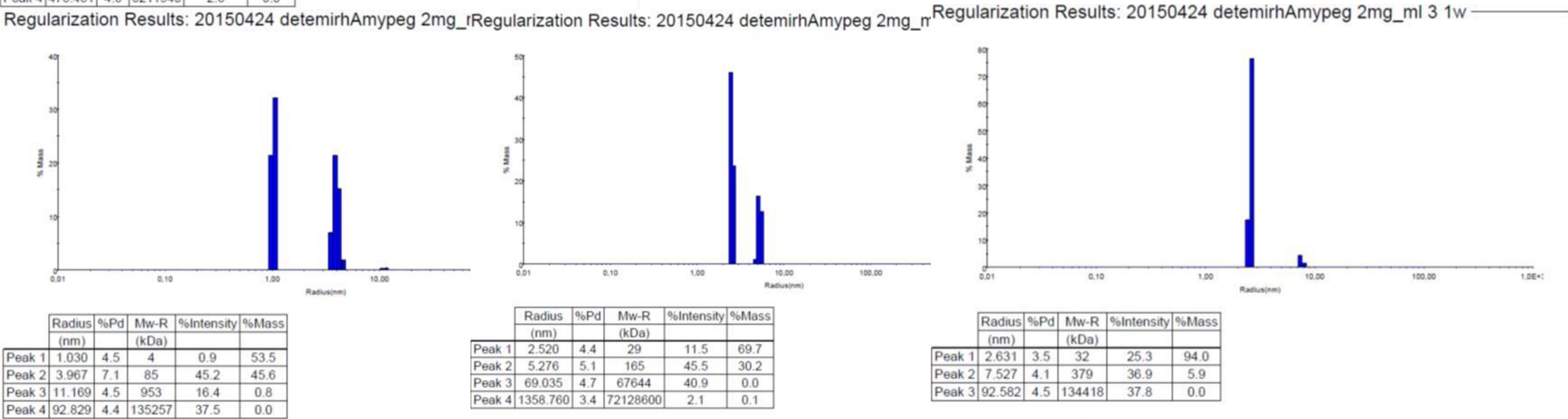


# Detemir – hAmy-PEG Time 1 week

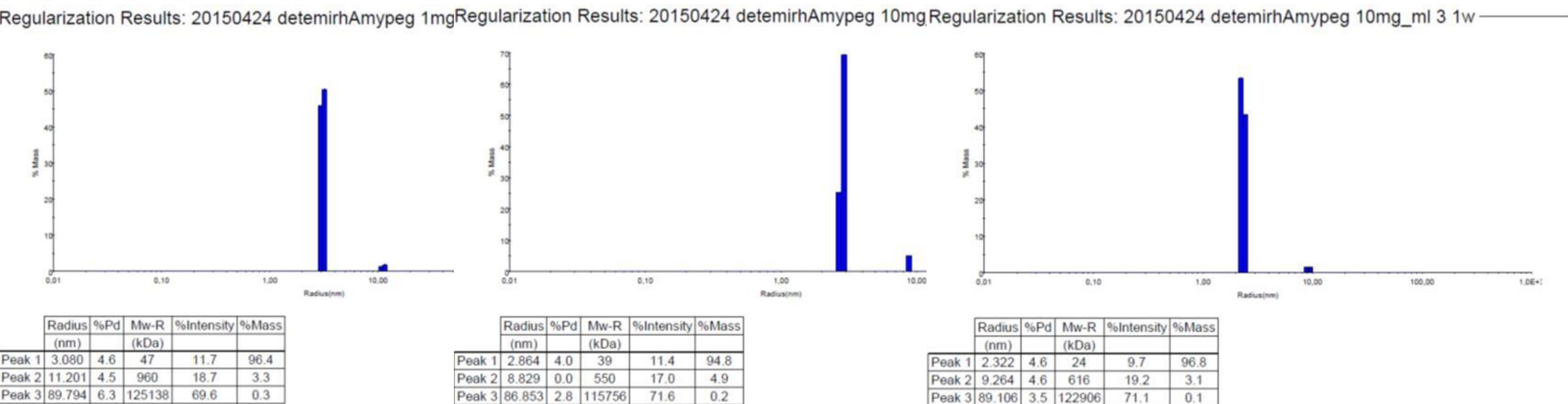
hAmypeg Ø



hAmypeg 100 µg/mL



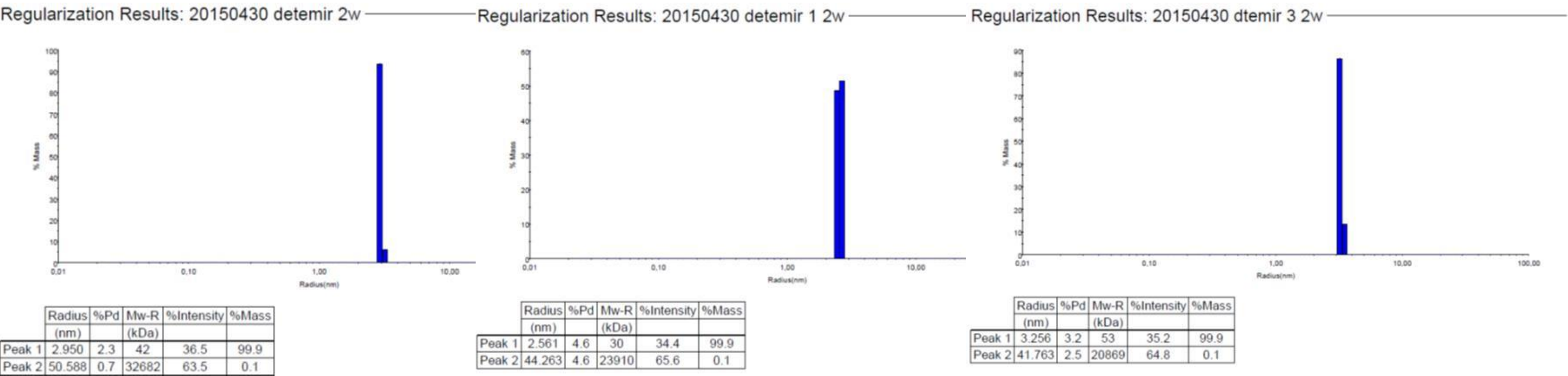
hAmypeg 500 µg/mL



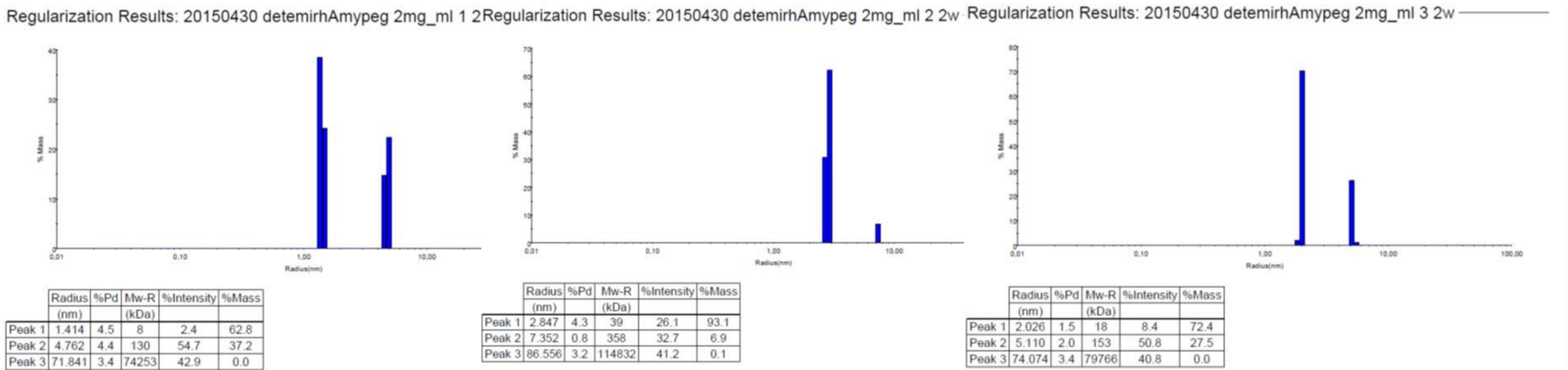


# Detemir – hAmy-PEG Time 2 weeks

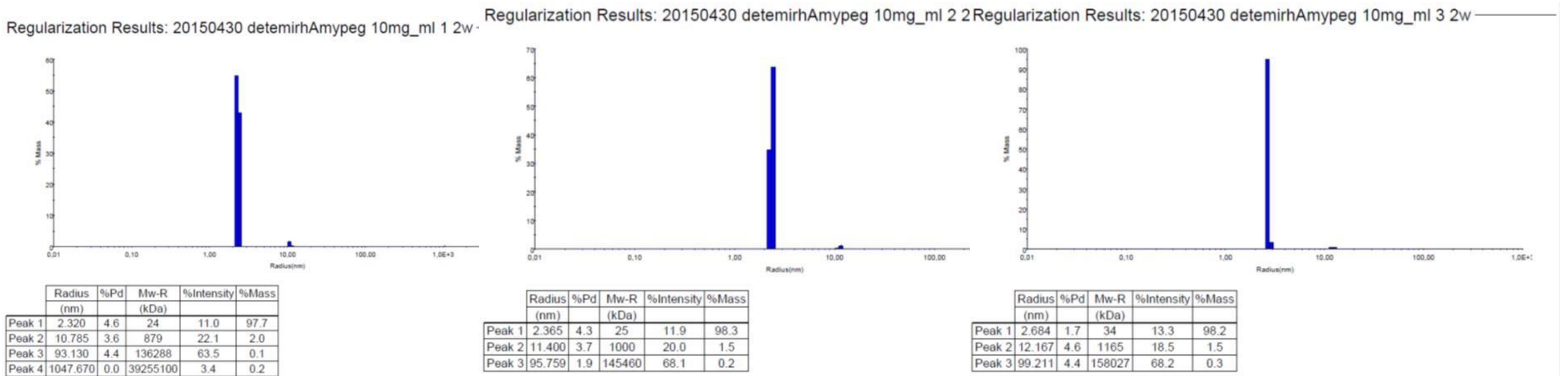
hAmypeg Ø



hAmypeg 100 µg/mL



hAmypeg 500 µg/mL

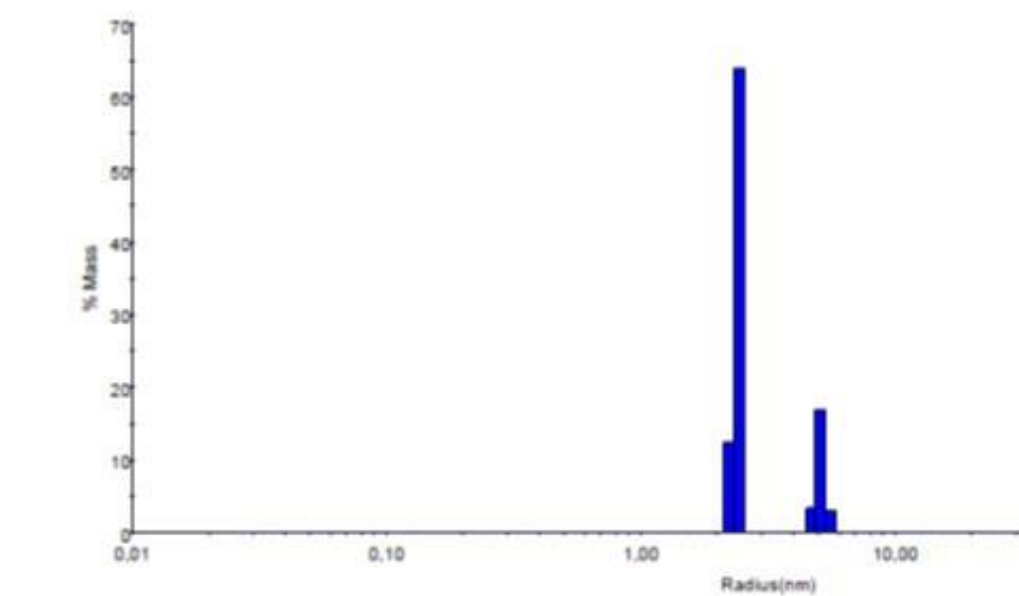




Detemir – hAmy-PEG Time 3 weeks

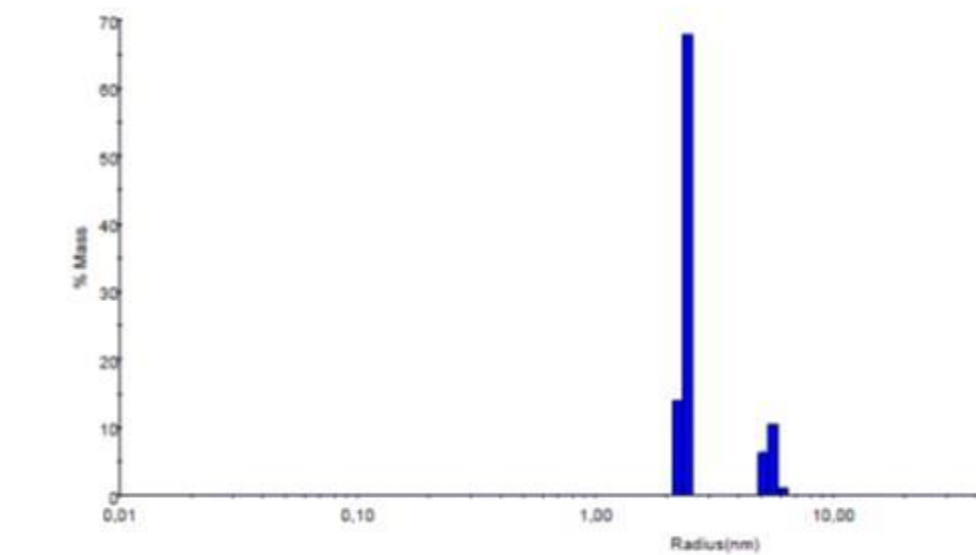
hAmypeg Ø

Regularization Results: 20150508 detemir 1 3w



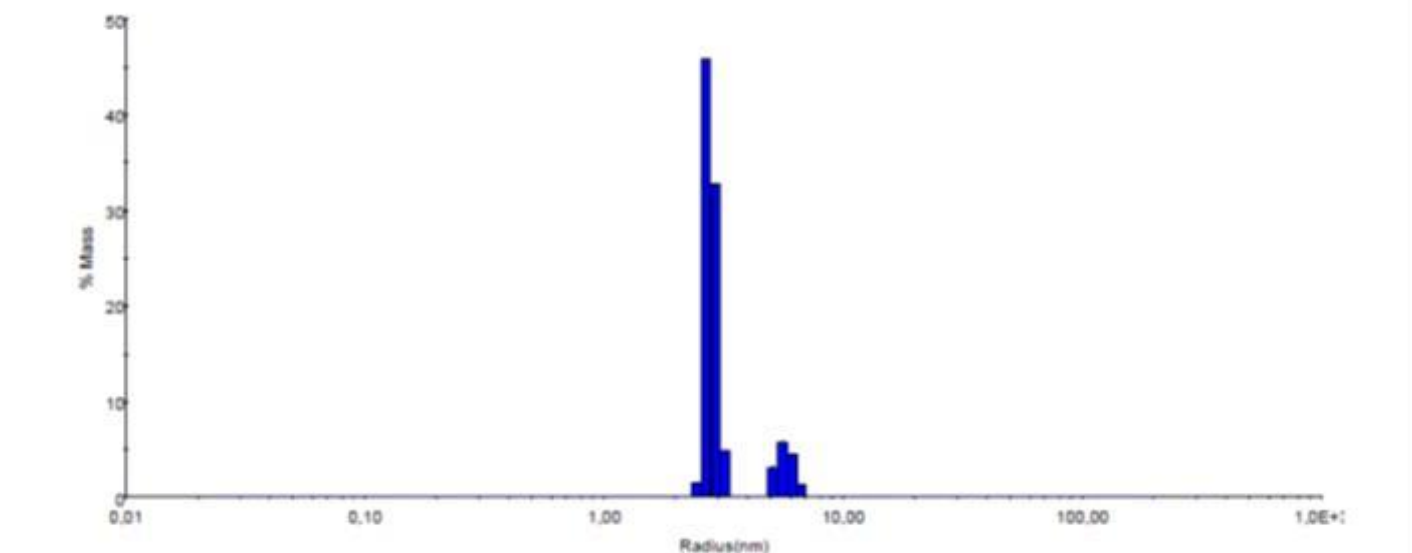
|        | Radius<br>(nm) | %Pd | Mw-R<br>(kDa) | %Intensity | %Mass |
|--------|----------------|-----|---------------|------------|-------|
| Peak 1 | 2.405          | 3.3 | 26            | 20.8       | 76.4  |
| Peak 2 | 5.087          | 4.8 | 151           | 60.4       | 23.4  |
| Peak 3 | 133.570        | 4.5 | 316894        | 18.8       | 0.2   |

Regularization Results: 20150508 detemir 1a 3w



|        | Radius<br>(nm) | %Pd | Mw-R<br>(kDa) | %Intensity | %Mass |
|--------|----------------|-----|---------------|------------|-------|
| Peak 1 | 2.404          | 3.4 | 26            | 23.0       | 81.9  |
| Peak 2 | 5.436          | 5.3 | 177           | 58.1       | 17.9  |
| Peak 3 | 120.772        | 5.2 | 250359        | 15.1       | 0.2   |
| Peak 4 | 723.891        | 1.4 | 16528800      | 3.7        | 0.0   |

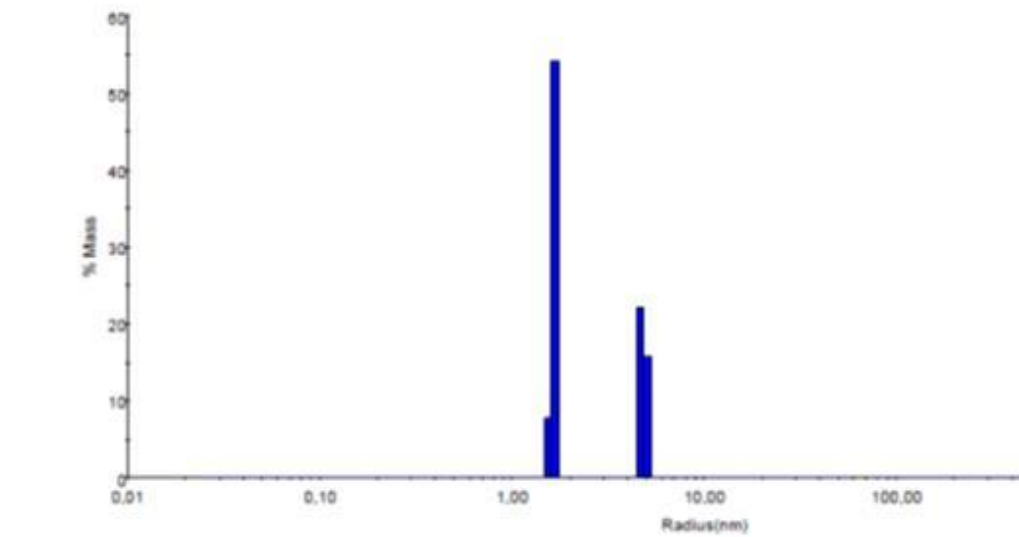
Regularization Results: 20150508 detemir 1b 3w



|        | Radius<br>(nm) | %Pd | Mw-R<br>(kDa) | %Intensity | %Mass |
|--------|----------------|-----|---------------|------------|-------|
| Peak 1 | 2.801          | 5.9 | 37            | 32.7       | 85.0  |
| Peak 2 | 5.739          | 8.3 | 201           | 49.3       | 14.9  |
| Peak 3 | 57.000         | 4.3 | 43209         | 4.0        | 0.0   |
| Peak 4 | 229.519        | 5.8 | 1124660       | 14.0       | 0.1   |

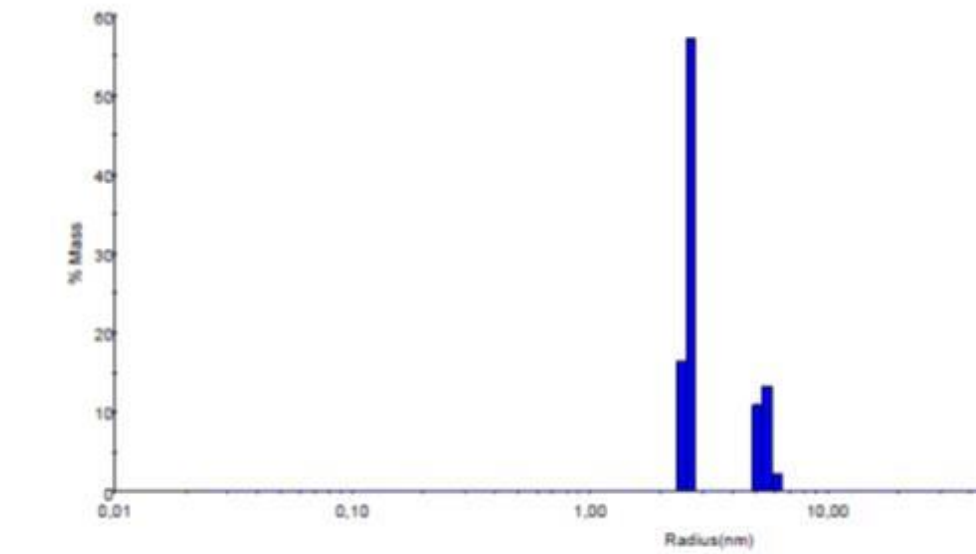
hAmypeg 100 µg/mL

Regularization Results: 20150508 detemirhAmypeg 2mg\_n



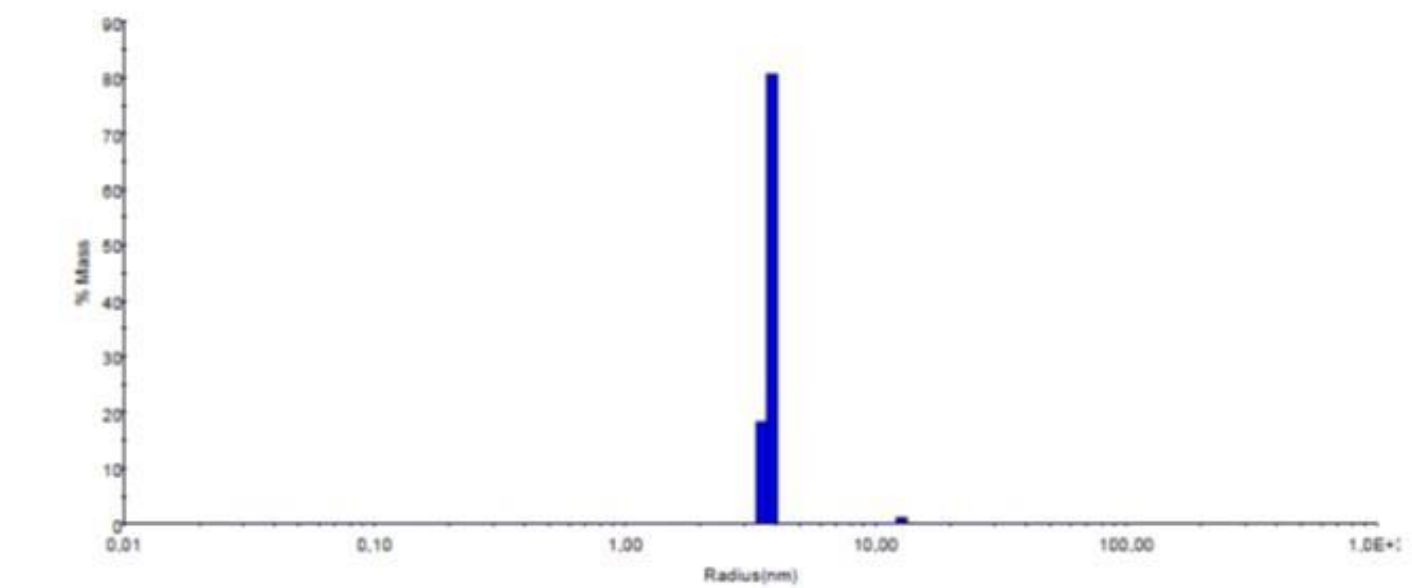
|        | Radius<br>(nm) | %Pd | Mw-R<br>(kDa) | %Intensity | %Mass |
|--------|----------------|-----|---------------|------------|-------|
| Peak 1 | 1.671          | 3.0 | 11            | 3.3        | 62.0  |
| Peak 2 | 4.827          | 4.6 | 134           | 47.9       | 37.8  |
| Peak 3 | 63.767         | 4.6 | 56178         | 45.4       | 0.0   |
| Peak 4 | 907.750        | 4.6 | 28069100      | 3.4        | 0.1   |

Regularization Results: 20150508 detemirhAmypeg 2m



|        | Radius<br>(nm) | %Pd | Mw-R<br>(kDa) | %Intensity | %Mass |
|--------|----------------|-----|---------------|------------|-------|
| Peak 1 | 2.623          | 3.7 | 32            | 15.0       | 73.5  |
| Peak 2 | 5.418          | 5.8 | 175           | 47.6       | 26.4  |
| Peak 3 | 53.342         | 4.5 | 36997         | 34.6       | 0.0   |
| Peak 4 | 390.912        | 4.1 | 3909540       | 2.9        | 0.1   |

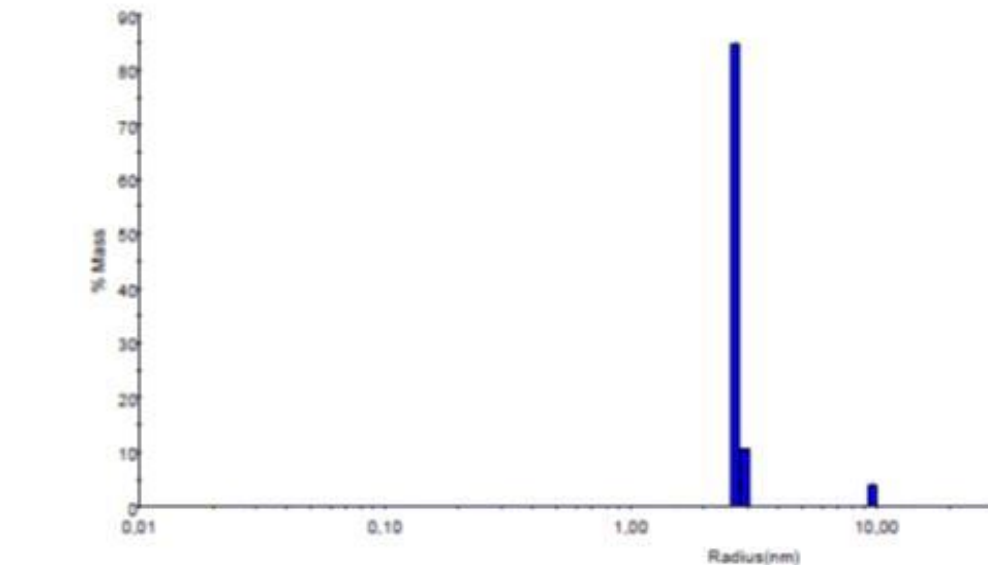
Regularization Results: 20150508 detemirhAmypeg 2mg\_ml 3 3w



|        | Radius<br>(nm) | %Pd | Mw-R<br>(kDa) | %Intensity | %Mass |
|--------|----------------|-----|---------------|------------|-------|
| Peak 1 | 3.800          | 3.5 | 77            | 46.3       | 98.7  |
| Peak 2 | 12.813         | 2.1 | 1315          | 20.8       | 1.2   |
| Peak 3 | 93.082         | 4.4 | 136121        | 32.9       | 0.1   |

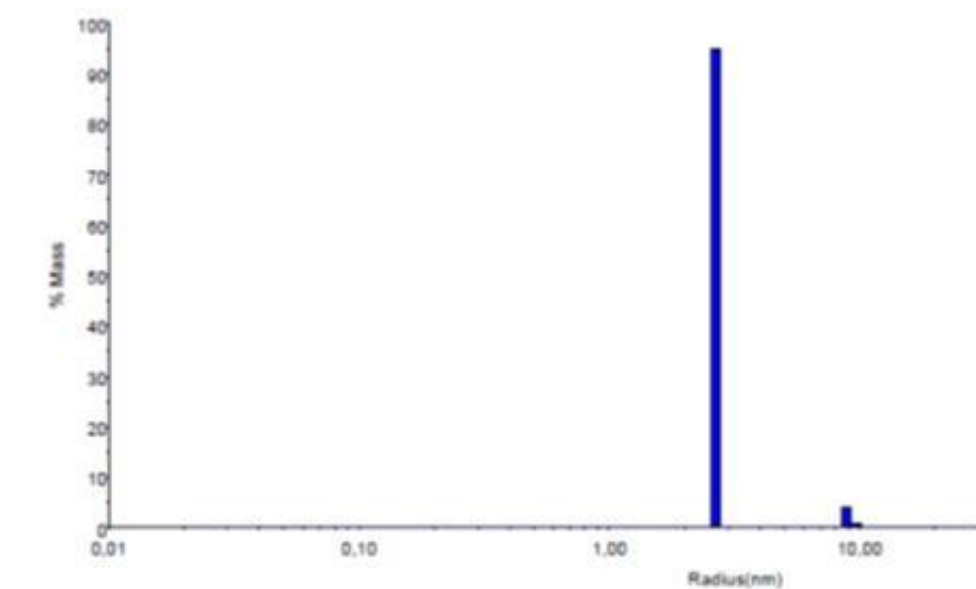
hAmypeg 500 µg/mL

Regularization Results: 20150508 detemirhAmypeg 1



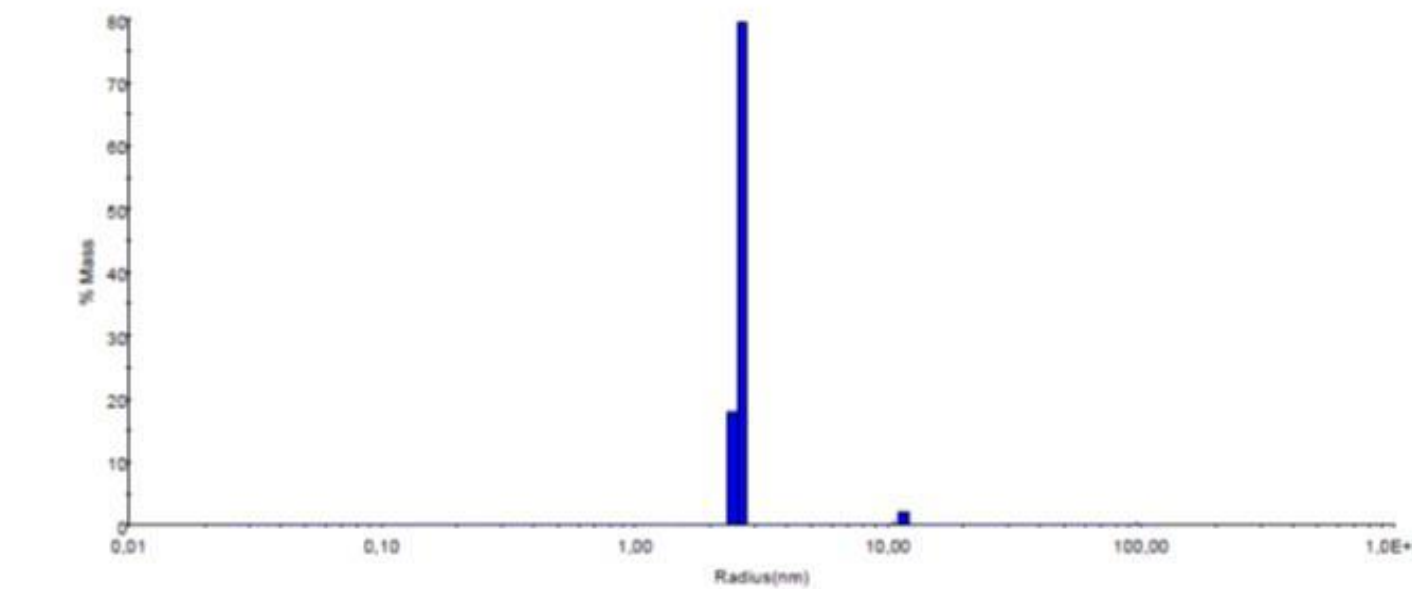
|        | Radius<br>(nm) | %Pd | Mw-R<br>(kDa) | %Intensity | %Mass |
|--------|----------------|-----|---------------|------------|-------|
| Peak 1 | 2.704          | 3.0 | 34            | 10.3       | 95.5  |
| Peak 2 | 9.679          | 0.0 | 682           | 19.9       | 4.1   |
| Peak 3 | 86.958         | 2.7 | 116084        | 62.6       | 0.2   |
| Peak 4 | 447.871        | 3.9 | 5374610       | 7.2        | 0.2   |

Regularization Results: 20150508 detemirhAmypeg 1



|        | Radius<br>(nm) | %Pd | Mw-R<br>(kDa) | %Intensity | %Mass |
|--------|----------------|-----|---------------|------------|-------|
| Peak 1 | 2.675          | 0.0 | 34            | 10.5       | 94.9  |
| Peak 2 | 8.973          | 3.6 | 571           | 20.1       | 4.9   |
| Peak 3 | 93.632         | 4.1 | 138013        | 69.4       | 0.2   |

Regularization Results: 20150508 detemirhAmypeg 10mg\_ml 3 3w



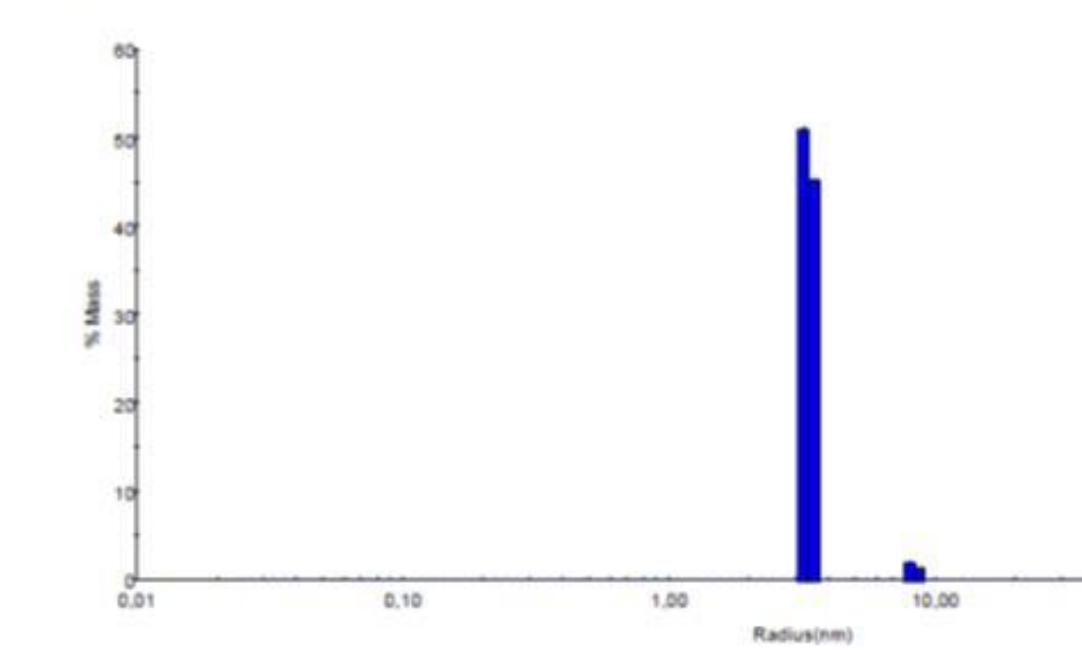
|        | Radius<br>(nm) | %Pd | Mw-R<br>(kDa) | %Intensity | %Mass |
|--------|----------------|-----|---------------|------------|-------|
| Peak 1 | 2.632          | 3.5 | 32            | 11.8       | 97.5  |
| Peak 2 | 11.524         | 2.7 | 1026          | 22.1       | 2.2   |
| Peak 3 | 96.568         | 1.9 | 148353        | 66.1       | 0.2   |



Detemir – hAmy-PEG Time 4 weeks

hAmypeg Ø

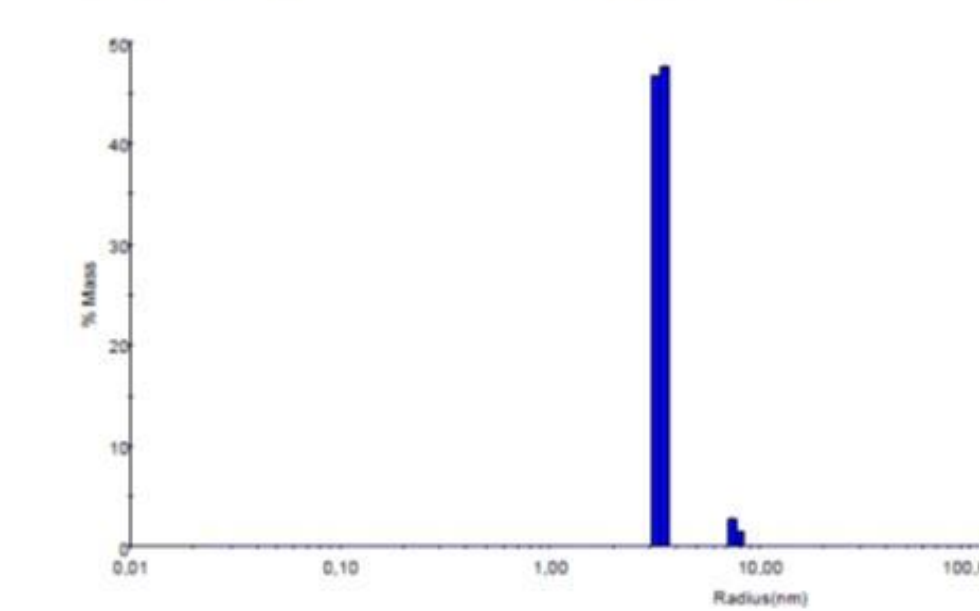
Regularization Results: 20150515 detemir 1 4w



|        | Radius<br>(nm) | %Pd | Mw-R<br>(kDa) | %Intensity | %Mass |
|--------|----------------|-----|---------------|------------|-------|
| Peak 1 | 3.360          | 4.6 | 57            | 54.9       | 96.4  |
| Peak 2 | 8.369          | 4.5 | 485           | 28.3       | 3.3   |
| Peak 3 | 214.496        | 4.0 | 959912        | 16.7       | 0.3   |

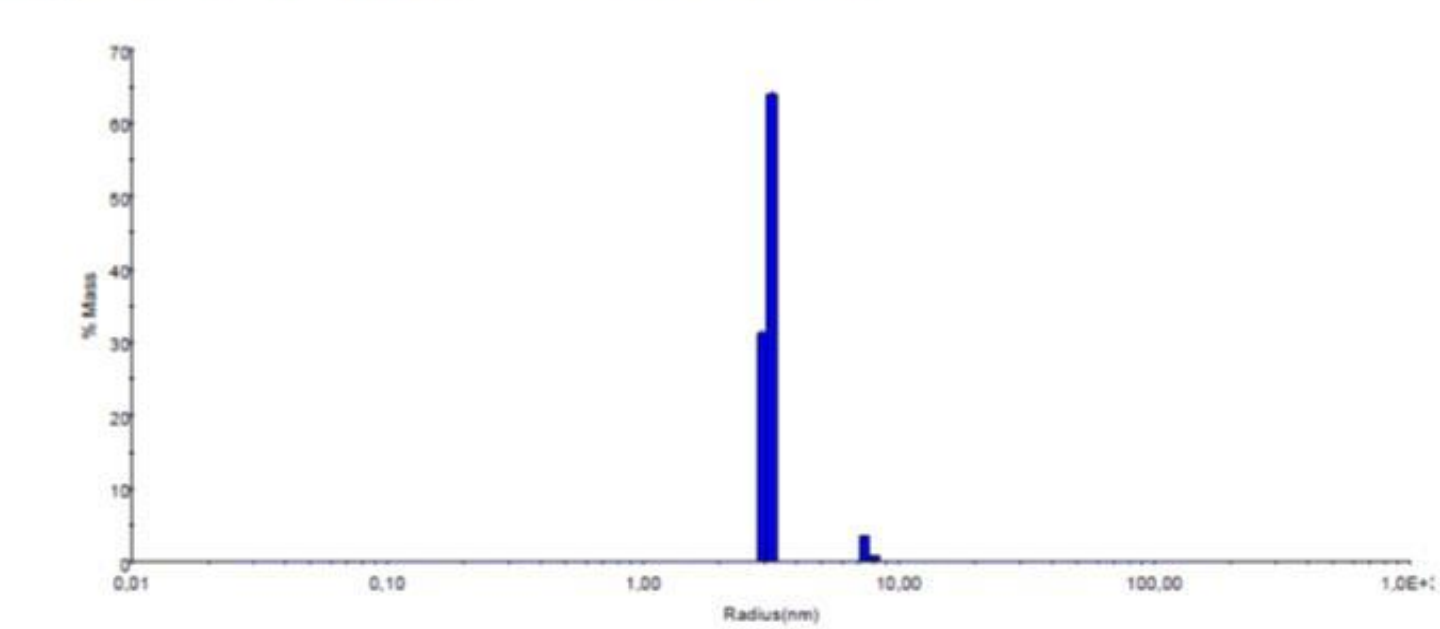
515 detemirhAmypeg 2mg\_ml 3 4w.exp

Regularization Results: 20150515 detemir 2 4



|        | Radius<br>(nm) | %Pd | Mw-R<br>(kDa) | %Intensity | %Mass |
|--------|----------------|-----|---------------|------------|-------|
| Peak 1 | 3.371          | 4.6 | 58            | 52.4       | 94.5  |
| Peak 2 | 7.594          | 4.4 | 387           | 27.1       | 4.3   |
| Peak 3 | 127.526        | 2.4 | 284356        | 18.2       | 1.0   |
| Peak 4 | 3084.610       | 3.9 | 491143000     | 2.3        | 0.2   |

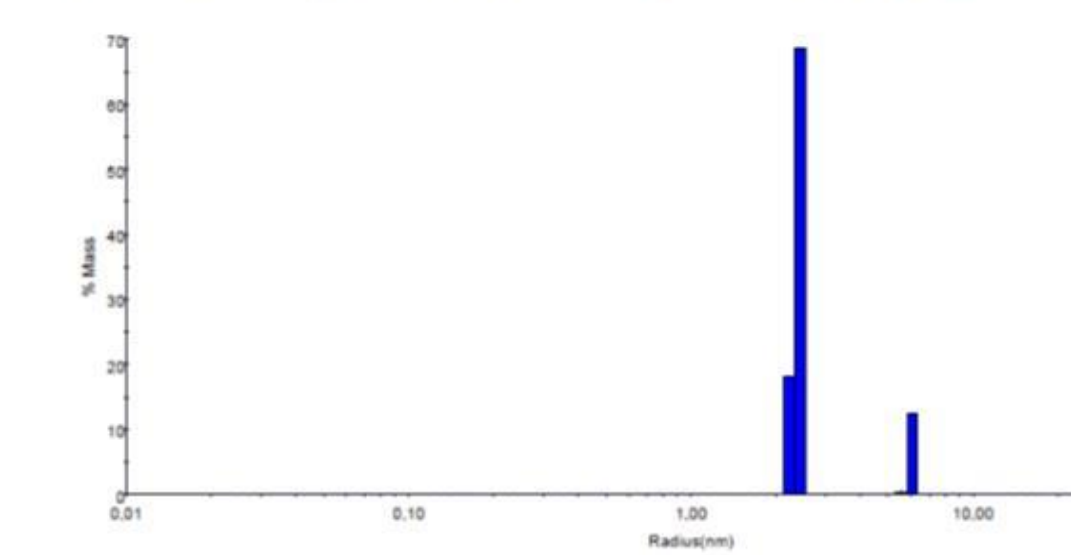
Regularization Results: 20150515 detemir 3 4



|        | Radius<br>(nm) | %Pd | Mw-R<br>(kDa) | %Intensity | %Mass |
|--------|----------------|-----|---------------|------------|-------|
| Peak 1 | 3.122          | 4.2 | 48            | 49.2       | 95.5  |
| Peak 2 | 7.482          | 3.7 | 373           | 30.9       | 4.4   |
| Peak 3 | 141.458        | 3.7 | 362424        | 19.9       | 0.1   |

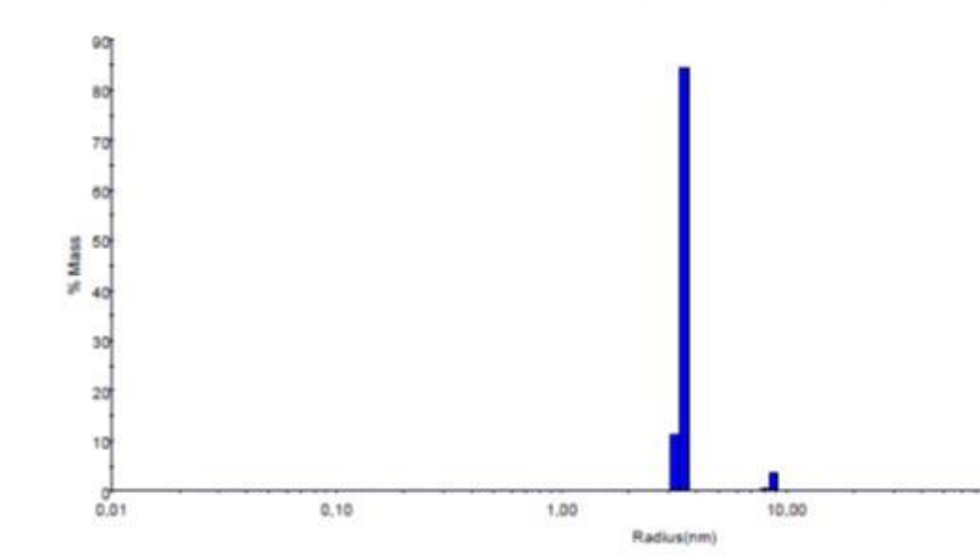
hAmypeg 100 µg/mL

Regularization Results: 20150515 detemirhAmypeg 2mg\_ml 1



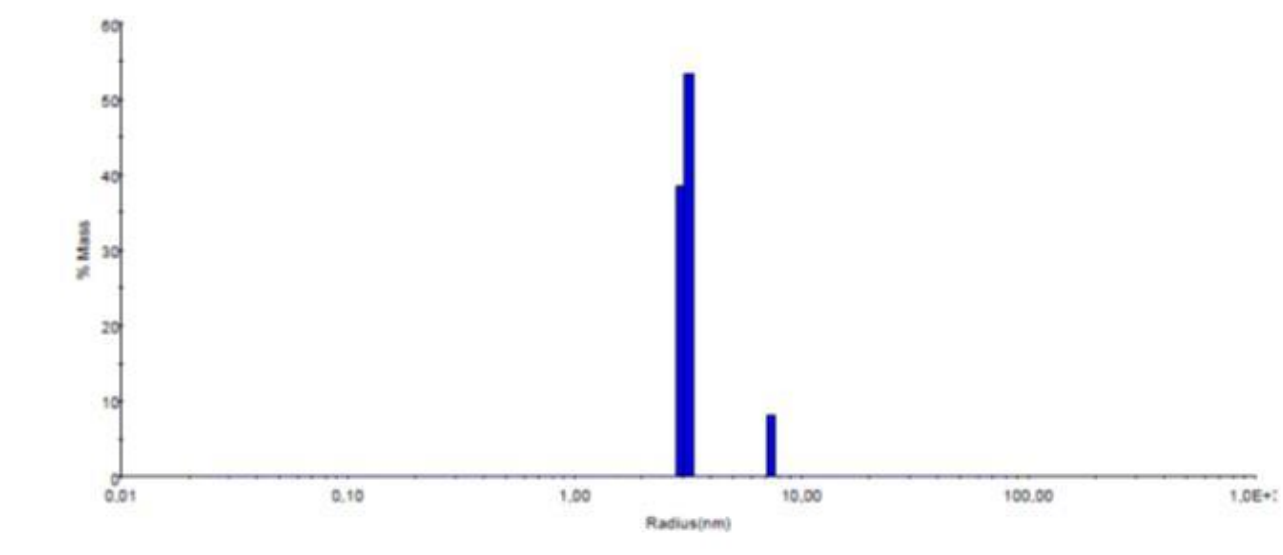
|        | Radius<br>(nm) | %Pd | Mw-R<br>(kDa) | %Intensity | %Mass |
|--------|----------------|-----|---------------|------------|-------|
| Peak 1 | 2.395          | 3.6 | 26            | 17.7       | 86.9  |
| Peak 2 | 6.095          | 1.6 | 231           | 43.2       | 13.0  |
| Peak 3 | 84.244         | 4.6 | 107784        | 39.1       | 0.0   |

Regularization Results: 20150515 detemirhAmypeg 2mg\_r



|        | Radius<br>(nm) | %Pd | Mw-R<br>(kDa) | %Intensity | %Mass |
|--------|----------------|-----|---------------|------------|-------|
| Peak 1 | 3.487          | 2.9 | 63            | 36.7       | 95.6  |
| Peak 2 | 8.721          | 3.1 | 534           | 25.2       | 4.3   |
| Peak 3 | 99.160         | 4.4 | 157837        | 38.1       | 0.1   |

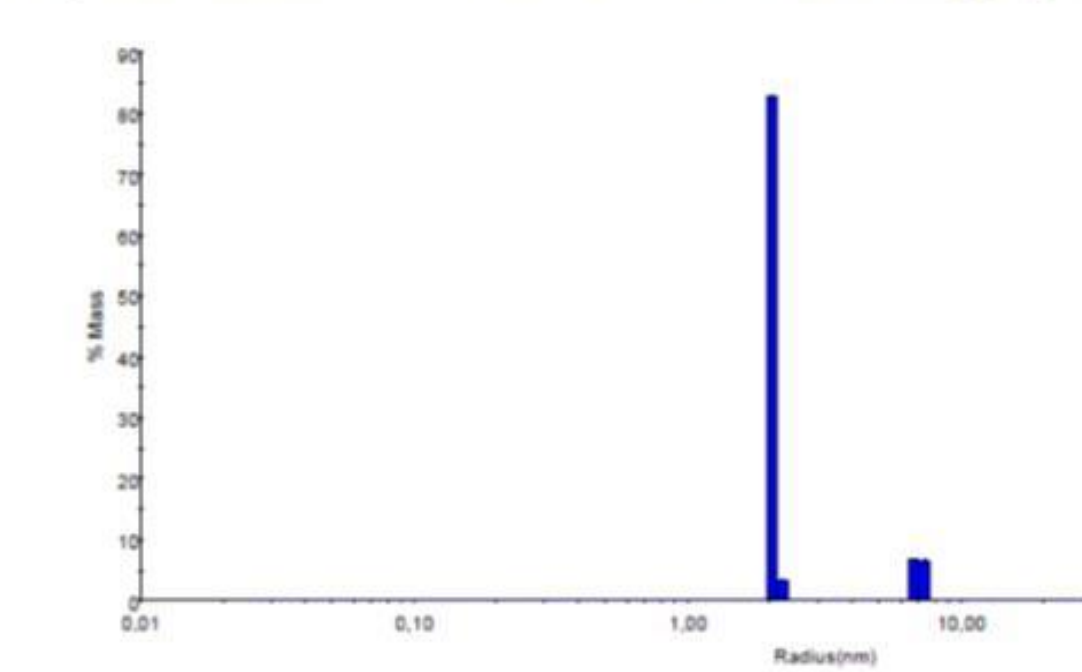
Regularization Results: 20150515 detemirhAmypeg 2mg\_ml 3 4



|        | Radius<br>(nm) | %Pd | Mw-R<br>(kDa) | %Intensity | %Mass |
|--------|----------------|-----|---------------|------------|-------|
| Peak 1 | 3.096          | 4.5 | 47            | 27.7       | 91.8  |
| Peak 2 | 7.347          | 0.0 | 358           | 32.0       | 8.1   |
| Peak 3 | 92.203         | 4.6 | 133134        | 40.3       | 0.1   |

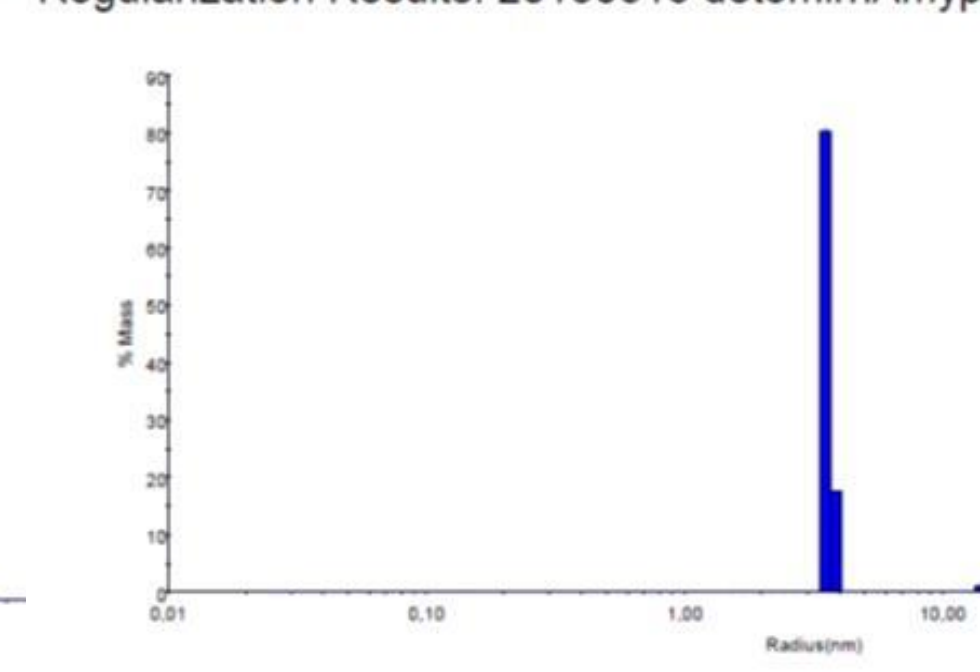
hAmypeg 500 µg/mL

Regularization Results: 20150515 detemirhAmypeg 10mg\_ml 1 4w



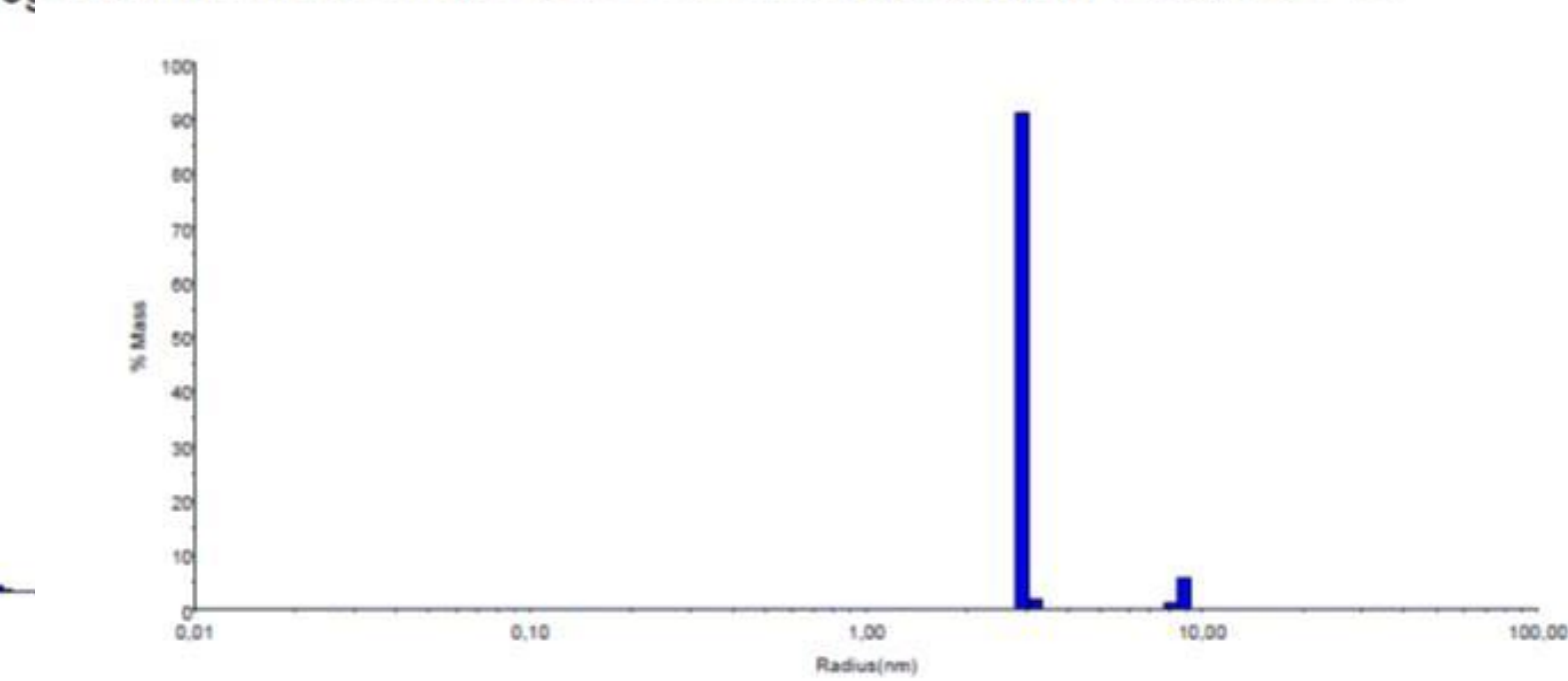
|        | Radius<br>(nm) | %Pd | Mw-R<br>(kDa) | %Intensity | %Mass |
|--------|----------------|-----|---------------|------------|-------|
| Peak 1 | 2.039          | 1.9 | 18            | 4.1        | 86.4  |
| Peak 2 | 7.025          | 4.6 | 322           | 25.9       | 13.3  |
| Peak 3 | 93.549         | 4.2 | 137726        | 69.9       | 0.2   |

Regularization Results: 20150515 detemirhAmypeg



|        | Radius<br>(nm) | %Pd | Mw-R<br>(kDa) | %Intensity | %Mass |
|--------|----------------|-----|---------------|------------|-------|
| Peak 1 | 3.584          | 3.6 | 67            | 17.2       | 97.9  |
| Peak 2 | 14.288         | 4.0 | 1697          | 16.7       | 1.6   |
| Peak 3 | 92.599         | 4.5 | 134475        | 62.2       | 0.3   |
| Peak 4 | 603.782        | 0.0 | 10811400      | 3.8        | 0.2   |

Regularization Results: 20150515 detemirhAmypeg 10mg\_ml 3 4w



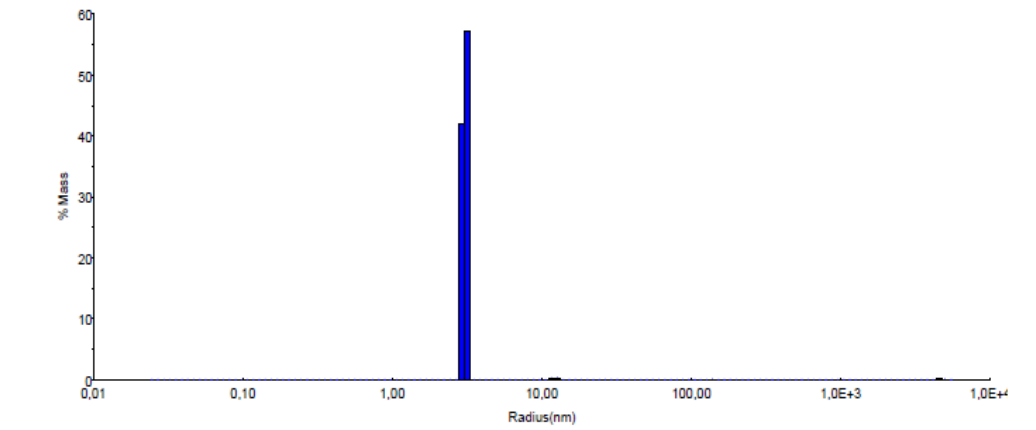
|        | Radius<br>(nm) | %Pd | Mw-R<br>(kDa) | %Intensity | %Mass |
|--------|----------------|-----|---------------|------------|-------|
| Peak 1 | 2.938          | 1.3 | 42            | 12.8       | 92.9  |
| Peak 2 | 8.686          | 3.5 | 529           | 24.7       | 7.0   |
| Peak 3 | 68.694         | 4.4 | 66865         | 62.5       | 0.1   |



# Detemir – hAmy-PEG Time 2 months

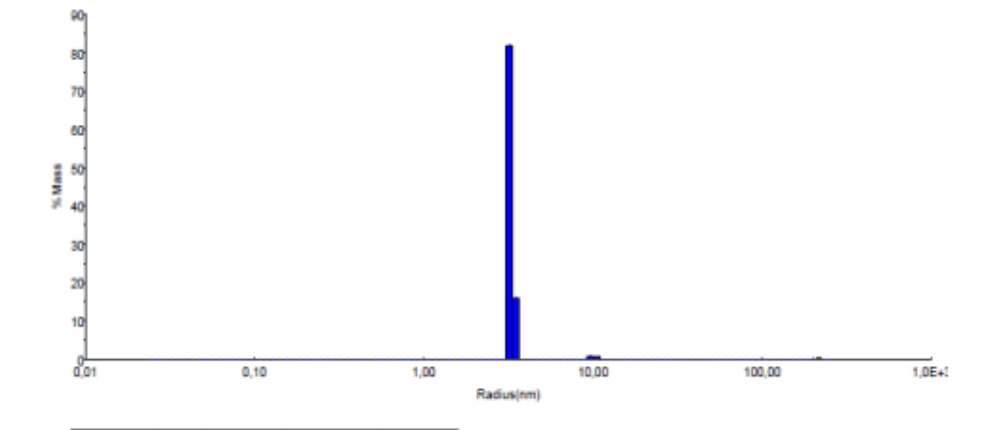
hAmypeg Ø

Regularization Results: detemir 1 2m



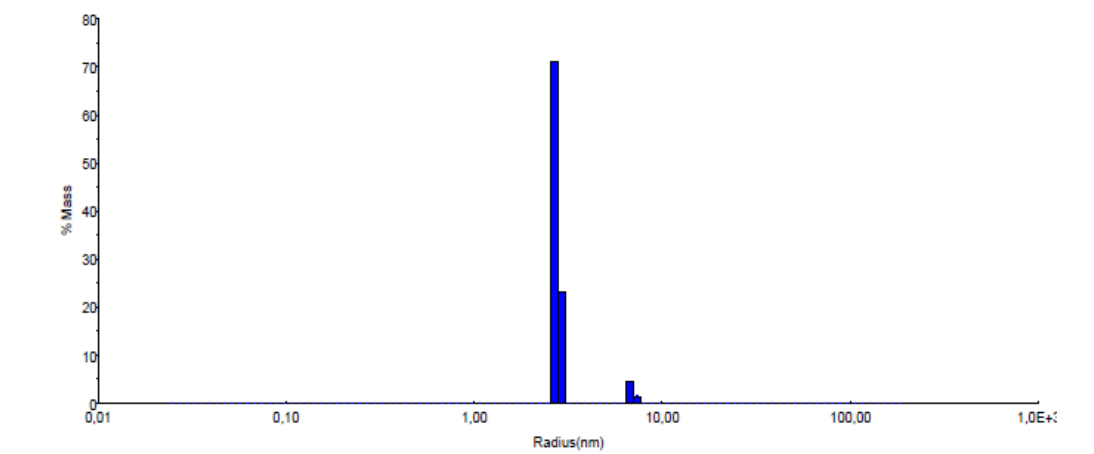
|        | Radius<br>(nm) | %Pd | Mw-R<br>(kDa) | %Intensity | %Mass |
|--------|----------------|-----|---------------|------------|-------|
| Peak 1 | 3.095          | 4.5 | 47            | 62.4       | 99.2  |
| Peak 2 | 12.255         | 4.5 | 1185          | 21.3       | 0.6   |
| Peak 3 | 143.579        | 4.4 | 375264        | 13.7       | 0.0   |
| Peak 4 | 4669.050       | 4.1 | 1295510000    | 2.5        | 0.2   |

Regularization Results: detemir 1a 2m



|        | Radius<br>(nm) | %Pd | Mw-R<br>(kDa) | %Intensity | %Mass |
|--------|----------------|-----|---------------|------------|-------|
| Peak 1 | 3.265          | 3.5 | 54            | 54.6       | 98.1  |
| Peak 2 | 10.067         | 4.6 | 748           | 23.0       | 1.4   |
| Peak 3 | 215.178        | 3.8 | 967072        | 22.3       | 0.4   |

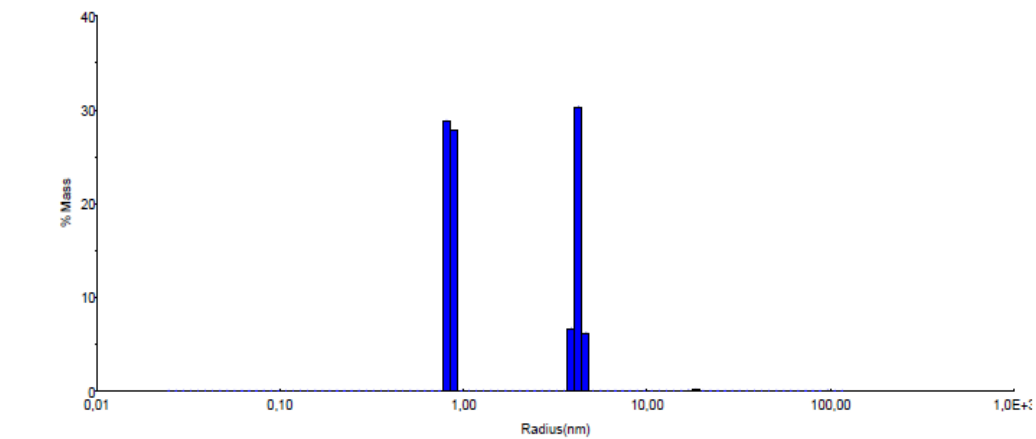
Regularization Results: detemir 1b 2m



|        | Radius<br>(nm) | %Pd | Mw-R<br>(kDa) | %Intensity | %Mass |
|--------|----------------|-----|---------------|------------|-------|
| Peak 1 | 2.738          | 4.0 | 36            | 38.9       | 94.1  |
| Peak 2 | 6.859          | 4.0 | 305           | 37.5       | 5.8   |
| Peak 3 | 160.622        | 4.5 | 487892        | 23.7       | 0.0   |

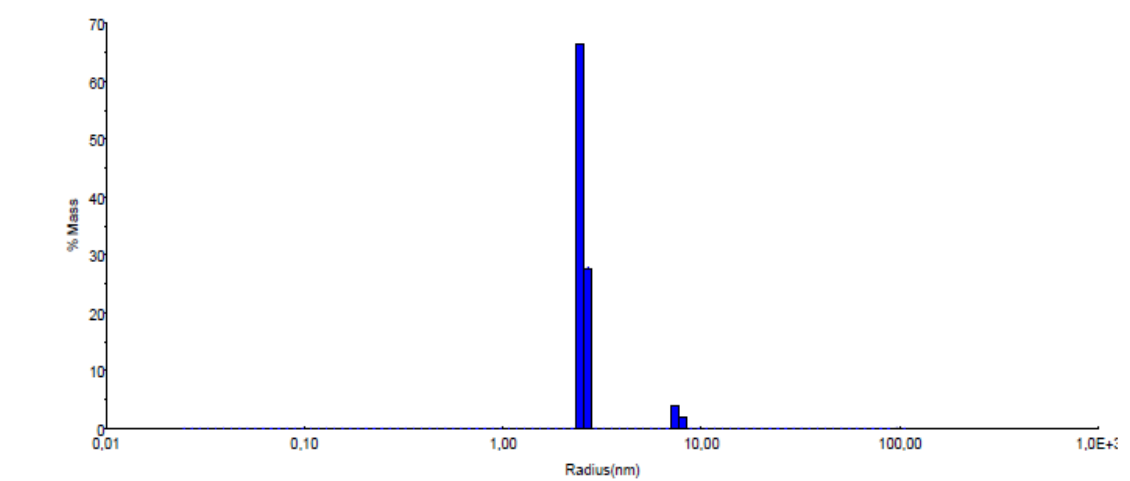
hAmypeg 100 µg/mL

Regularization Results: 20150616 dethAmypeg 2mg\_ml 1 2m



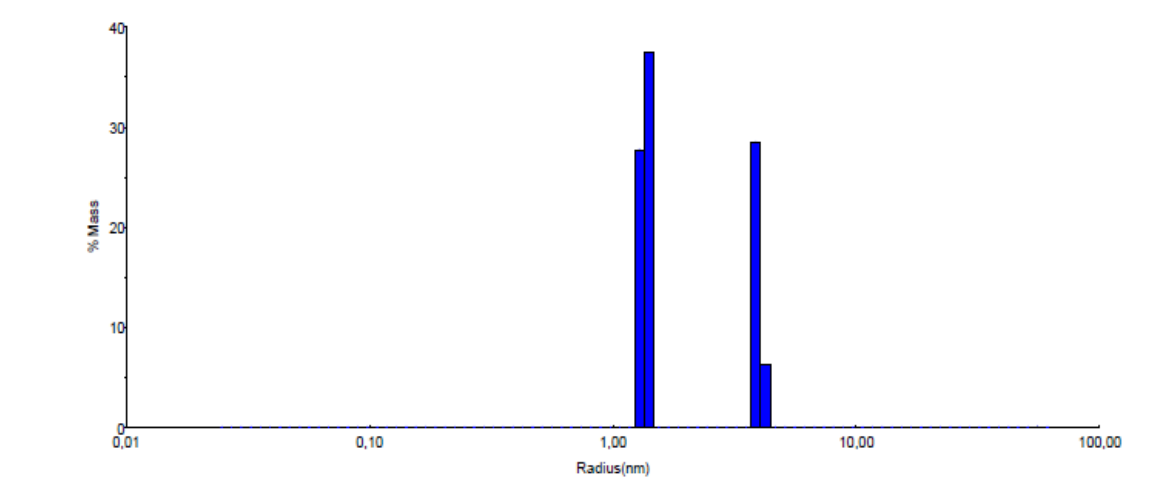
|        | Radius<br>(nm) | %Pd | Mw-R<br>(kDa) | %Intensity | %Mass |
|--------|----------------|-----|---------------|------------|-------|
| Peak 1 | 0.849          | 4.6 | 2             | 0.6        | 56.7  |
| Peak 2 | 4.236          | 5.0 | 99            | 52.7       | 43.1  |
| Peak 3 | 18.152         | 3.3 | 2970          | 14.9       | 0.2   |
| Peak 4 | 98.088         | 4.6 | 153871        | 31.9       | 0.1   |

Regularization Results: dethAmypeg 2mg\_ml 2 2m



|        | Radius<br>(nm) | %Pd | Mw-R<br>(kDa) | %Intensity | %Mass |
|--------|----------------|-----|---------------|------------|-------|
| Peak 1 | 2.510          | 4.3 | 29            | 25.0       | 94.3  |
| Peak 2 | 7.576          | 4.4 | 385           | 41.1       | 5.7   |
| Peak 3 | 94.378         | 3.7 | 140600        | 34.0       | 0.0   |

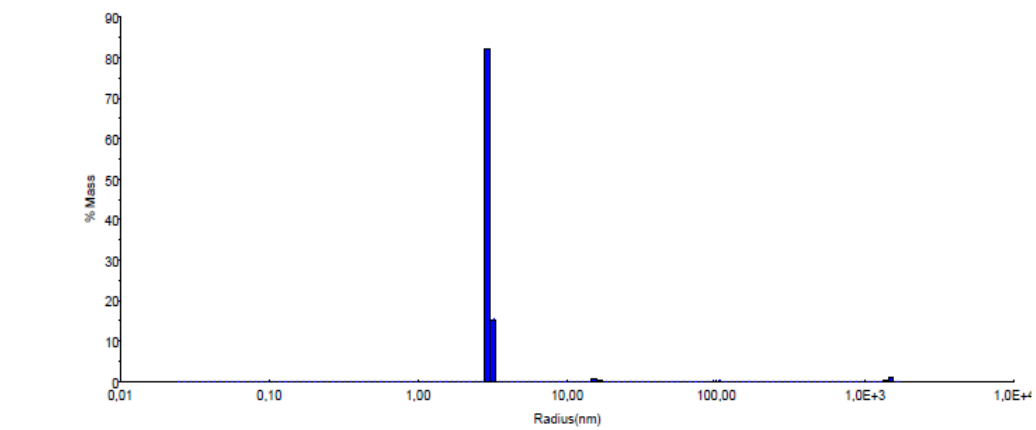
Regularization Results: dethAmypeg 2mg\_ml 3 2m



|        | Radius<br>(nm) | %Pd | Mw-R<br>(kDa) | %Intensity | %Mass |
|--------|----------------|-----|---------------|------------|-------|
| Peak 1 | 1.354          | 4.5 | 7             | 3.6        | 65.2  |
| Peak 2 | 3.930          | 3.6 | 83            | 46.1       | 34.8  |
| Peak 3 | 54.704         | 3.2 | 39246         | 50.3       | 0.0   |

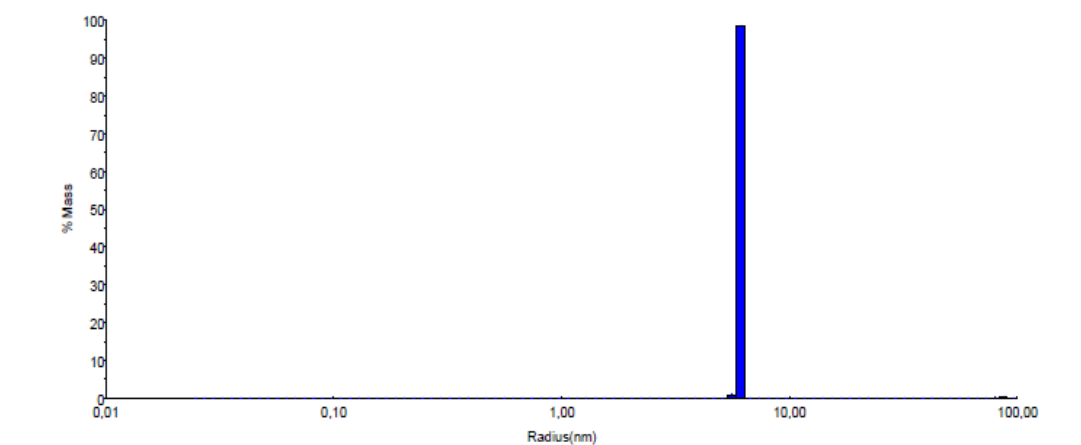
hAmypeg 500 µg/mL

Regularization Results: 20160616 dethAmypeg 10mg\_ml 1 2m



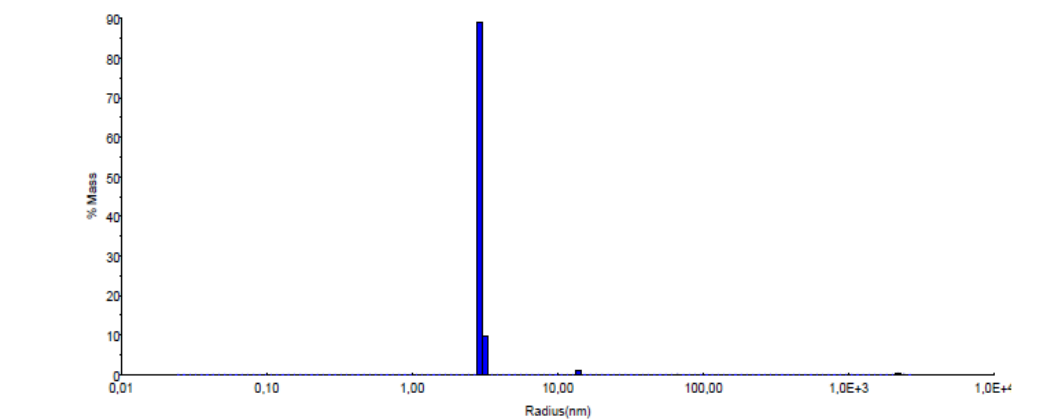
|        | Radius<br>(nm) | %Pd | Mw-R<br>(kDa) | %Intensity | %Mass |
|--------|----------------|-----|---------------|------------|-------|
| Peak 1 | 2.977          | 3.5 | 43            | 16.4       | 97.7  |
| Peak 2 | 15.815         | 4.4 | 2152          | 21.0       | 0.9   |
| Peak 3 | 101.449        | 4.5 | 166494        | 48.5       | 0.2   |
| Peak 4 | 1481.560       | 3.8 | 88313800      | 14.1       | 1.2   |

Regularization Results: 20160616 dethAmypeg 10mg\_ml 2 2m



|        | Radius<br>(nm) | %Pd | Mw-R<br>(kDa) | %Intensity | %Mass |
|--------|----------------|-----|---------------|------------|-------|
| Peak 1 | 6.109          | 0.9 | 232           | 41.4       | 99.5  |
| Peak 2 | 85.725         | 3.9 | 112272        | 58.6       | 0.5   |

Regularization Results: 20160616 dethAmypeg 10mg\_ml 3 2m

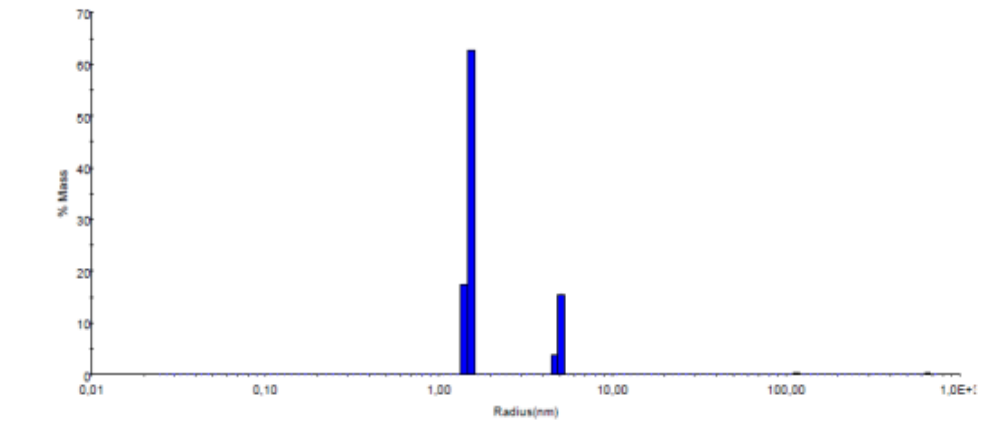


|        | Radius<br>(nm) | %Pd | Mw-R<br>(kDa) | %Intensity | %Mass |
|--------|----------------|-----|---------------|------------|-------|
| Peak 1 | 2.960          | 2.8 | 43            | 21.2       | 98.6  |
| Peak 2 | 13.997         | 1.2 | 1617          | 19.9       | 0.9   |
| Peak 3 | 66.239         | 2.1 | 61407         | 54.7       | 0.1   |
| Peak 4 | 2206.610       | 2.9 | 224299000     | 4.1        | 0.4   |

Detemir – hAmy-PEG Time 3 months

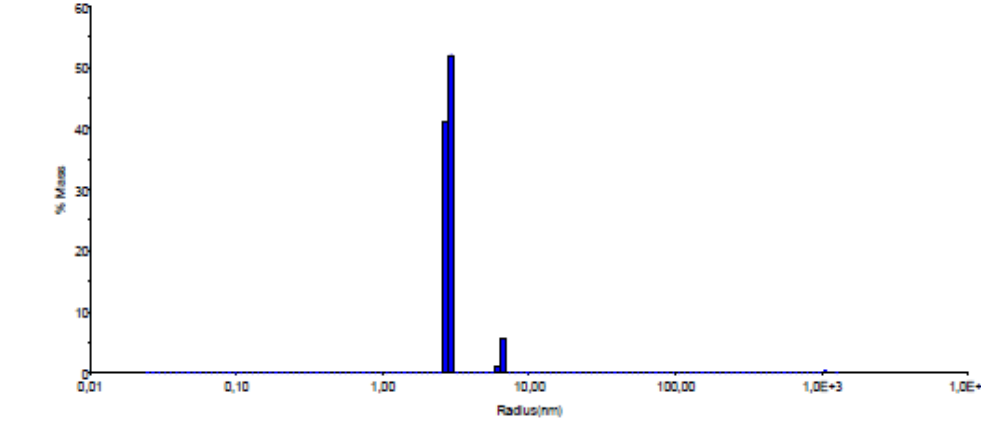
hAmypeg Ø

Regularization Results: 25C



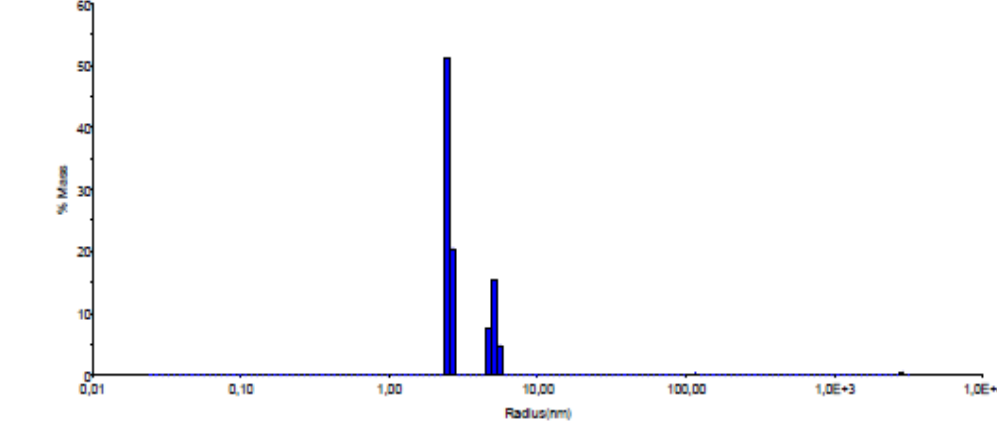
|        | Radius<br>(nm) | %Pd | Mw-R<br>(kDa) | %Intensity | %Mass |
|--------|----------------|-----|---------------|------------|-------|
| Peak 1 | 1.512          | 3.7 | 9             | 4.5        | 80.0  |
| Peak 2 | 5.000          | 3.6 | 145           | 39.5       | 19.4  |
| Peak 3 | 114.662        | 2.5 | 221720        | 37.2       | 0.3   |
| Peak 4 | 659.644        | 1.7 | 13298400      | 18.7       | 0.4   |

Regularization Results: 25C



|        | Radius<br>(nm) | %Pd | Mw-R<br>(kDa) | %Intensity | %Mass |
|--------|----------------|-----|---------------|------------|-------|
| Peak 1 | 2.819          | 4.5 | 38            | 34.1       | 93.0  |
| Peak 2 | 6.613          | 3.2 | 280           | 31.2       | 6.7   |
| Peak 3 | 82.032         | 4.1 | 101278        | 23.8       | 0.0   |
| Peak 4 | 1056.360       | 2.7 | 40021400      | 10.9       | 0.3   |

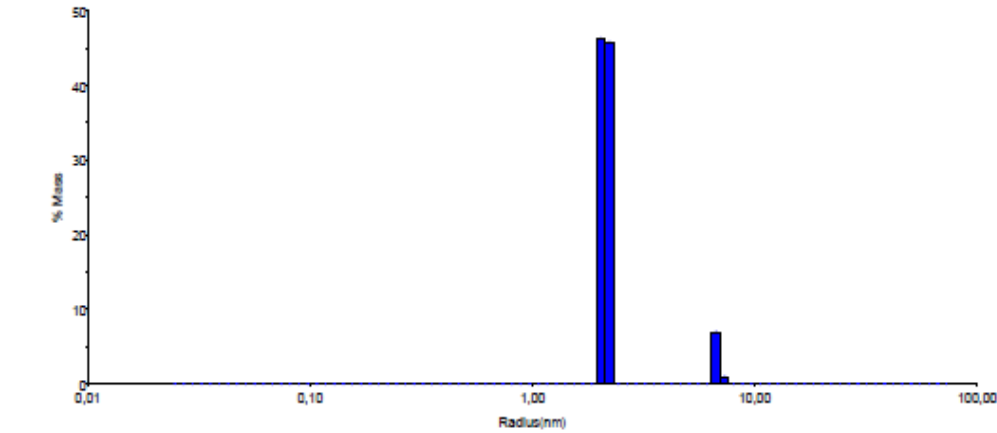
Regularization Results: 25C



|        | Radius<br>(nm) | %Pd | Mw-R<br>(kDa) | %Intensity | %Mass |
|--------|----------------|-----|---------------|------------|-------|
| Peak 1 | 2.507          | 4.2 | 29            | 15.1       | 71.6  |
| Peak 2 | 5.052          | 6.1 | 149           | 47.7       | 27.6  |
| Peak 3 | 114.567        | 2.6 | 221293        | 31.6       | 0.3   |
| Peak 4 | 2866.330       | 1.8 | 413648000     | 5.7        | 0.5   |

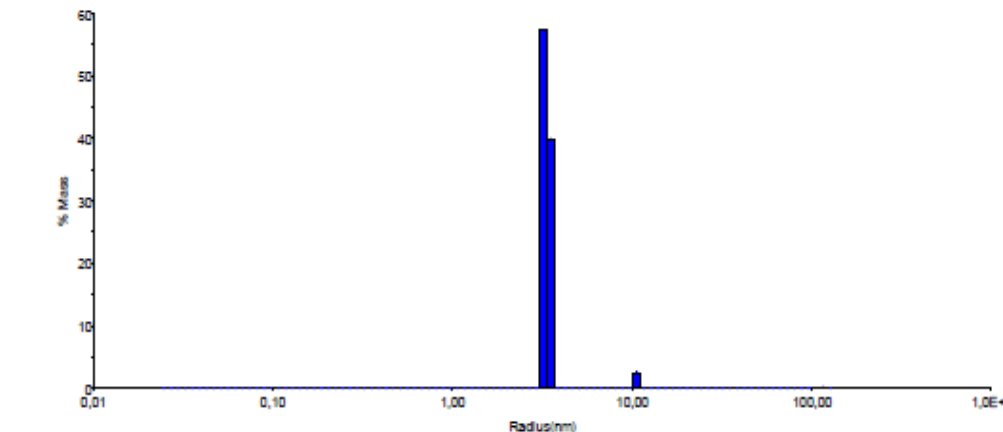
hAmypeg 100 µg/mL

Regularization Results: 25C



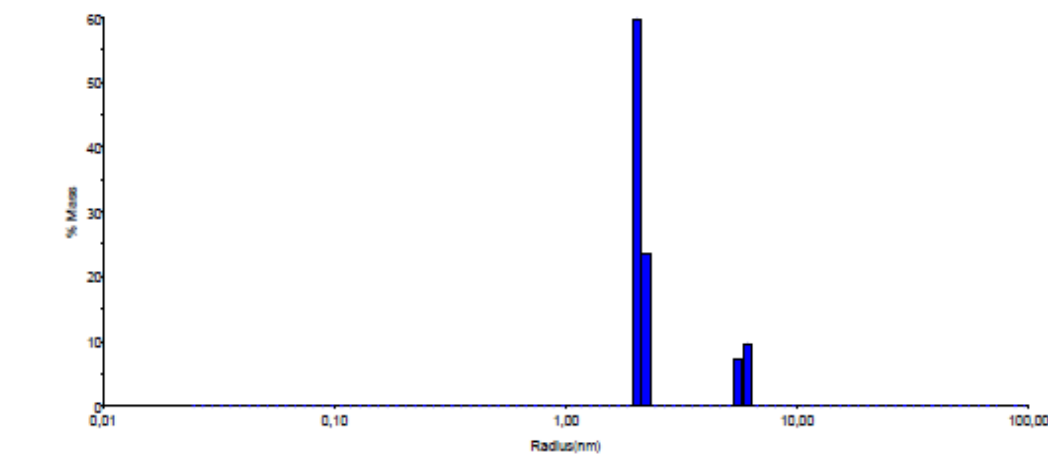
|        | Radius<br>(nm) | %Pd | Mw-R<br>(kDa) | %Intensity | %Mass |
|--------|----------------|-----|---------------|------------|-------|
| Peak 1 | 2.128          | 4.6 | 20            | 19.9       | 92.0  |
| Peak 2 | 6.784          | 3.2 | 297           | 55.1       | 8.0   |
| Peak 3 | 63.797         | 4.6 | 56242         | 25.0       | 0.0   |

Regularization Results: 25C



|        | Radius<br>(nm) | %Pd | Mw-R<br>(kDa) | %Intensity | %Mass |
|--------|----------------|-----|---------------|------------|-------|
| Peak 1 | 3.342          | 4.6 | 57            | 39.0       | 97.2  |
| Peak 2 | 10.610         | 0.0 | 845           | 32.1       | 2.6   |
| Peak 3 | 112.434        | 4.2 | 211774        | 28.9       | 0.2   |

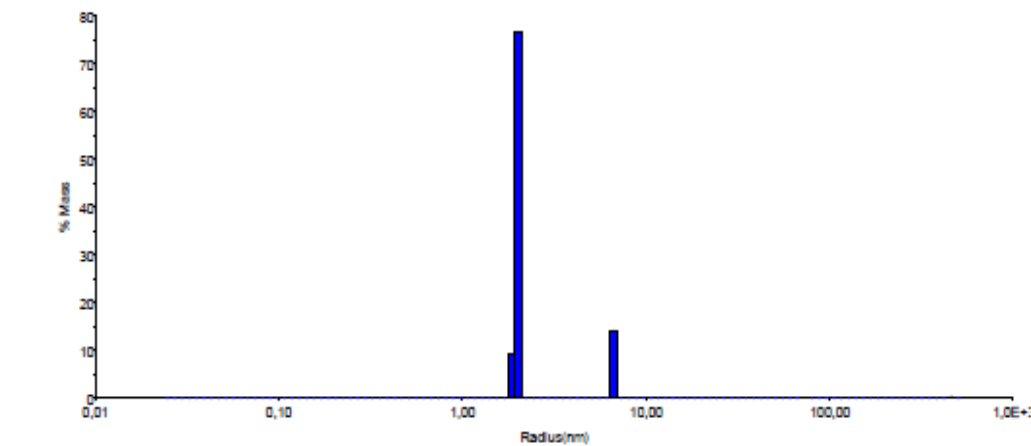
Regularization Results: 25C



|        | Radius<br>(nm) | %Pd | Mw-R<br>(kDa) | %Intensity | %Mass |
|--------|----------------|-----|---------------|------------|-------|
| Peak 1 | 2.086          | 4.2 | 19            | 11.7       | 83.2  |
| Peak 2 | 5.884          | 4.5 | 213           | 52.6       | 16.8  |
| Peak 3 | 81.816         | 4.0 | 100657        | 35.7       | 0.0   |

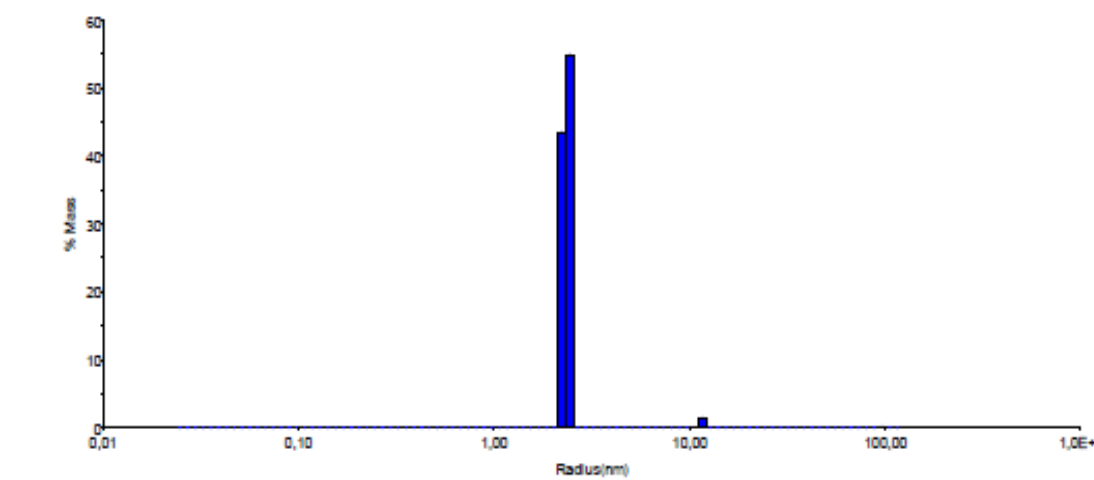
hAmypeg 500 µg/mL

Regularization Results: 25C



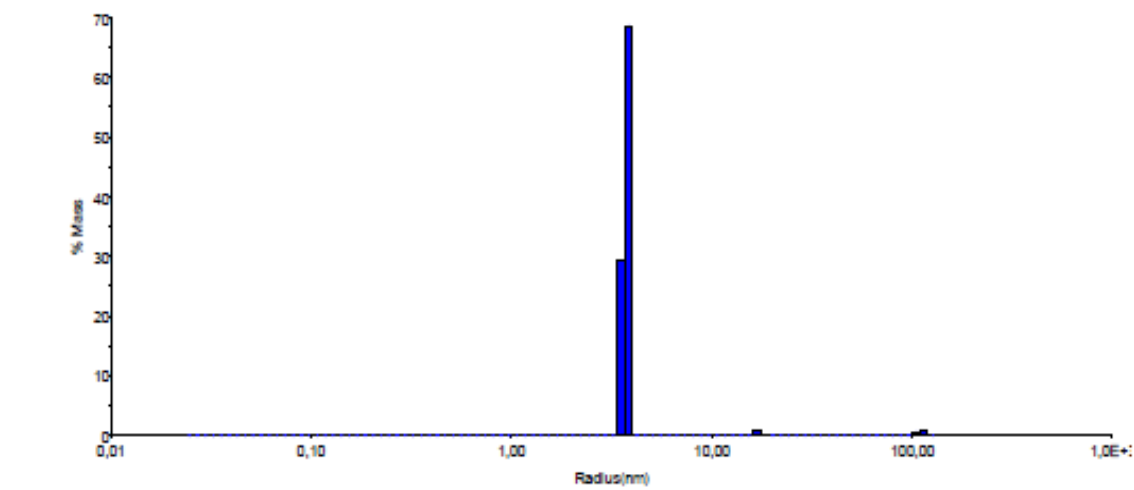
|        | Radius<br>(nm) | %Pd | Mw-R<br>(kDa) | %Intensity | %Mass |
|--------|----------------|-----|---------------|------------|-------|
| Peak 1 | 2.012          | 2.7 | 17            | 3.8        | 85.5  |
| Peak 2 | 6.703          | 0.0 | 289           | 22.6       | 14.0  |
| Peak 3 | 73.246         | 1.7 | 77696         | 61.9       | 0.1   |
| Peak 4 | 456.843        | 1.7 | 5629900       | 11.8       | 0.3   |

Regularization Results: 25C



|        | Radius<br>(nm) | %Pd | Mw-R<br>(kDa) | %Intensity | %Mass |
|--------|----------------|-----|---------------|------------|-------|
| Peak 1 | 2.346          | 4.5 | 25            | 13.2       | 98.4  |
| Peak 2 | 11.585         | 1.8 | 1039          | 23.3       | 1.5   |
| Peak 3 | 96.801         | 2.4 | 149192        | 63.5       | 0.1   |

Regularization Results: 25C

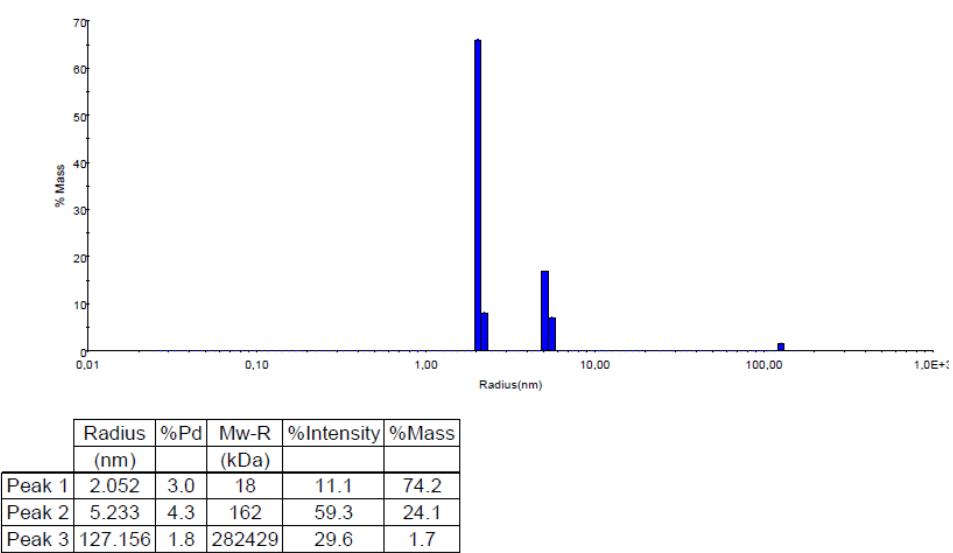
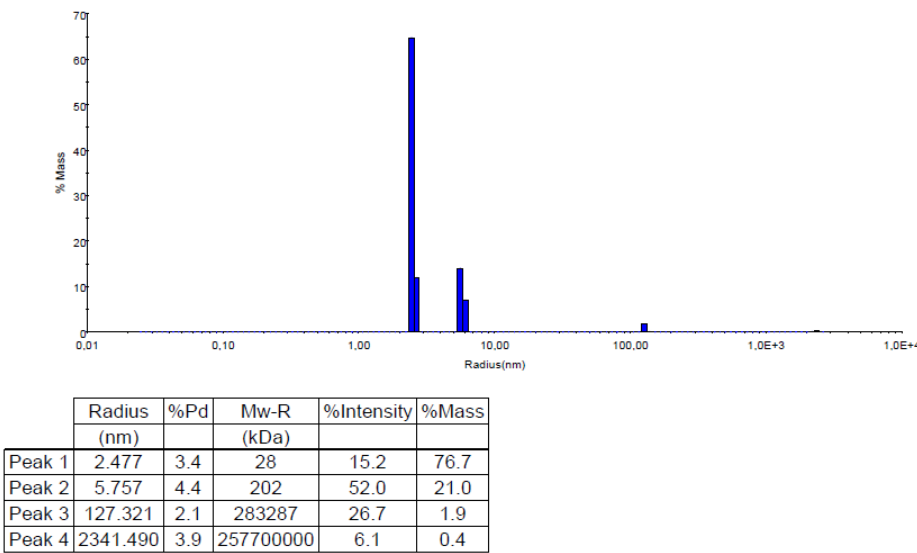
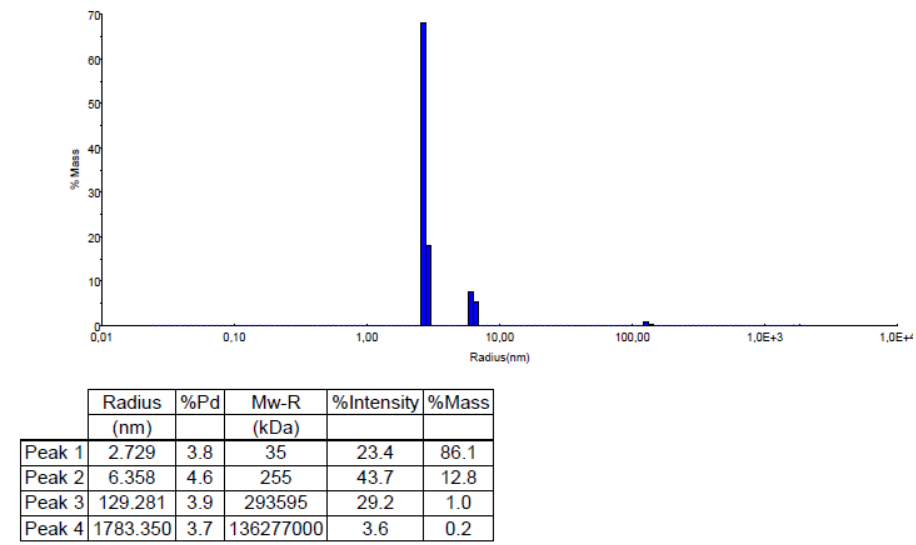


|        | Radius<br>(nm) | %Pd | Mw-R<br>(kDa) | %Intensity | %Mass |
|--------|----------------|-----|---------------|------------|-------|
| Peak 1 | 3.761          | 4.1 | 75            | 19.6       | 97.8  |
| Peak 2 | 16.960         | 2.9 | 2534          | 16.2       | 1.0   |
| Peak 3 | 111.359        | 4.5 | 207067        | 64.3       | 1.3   |

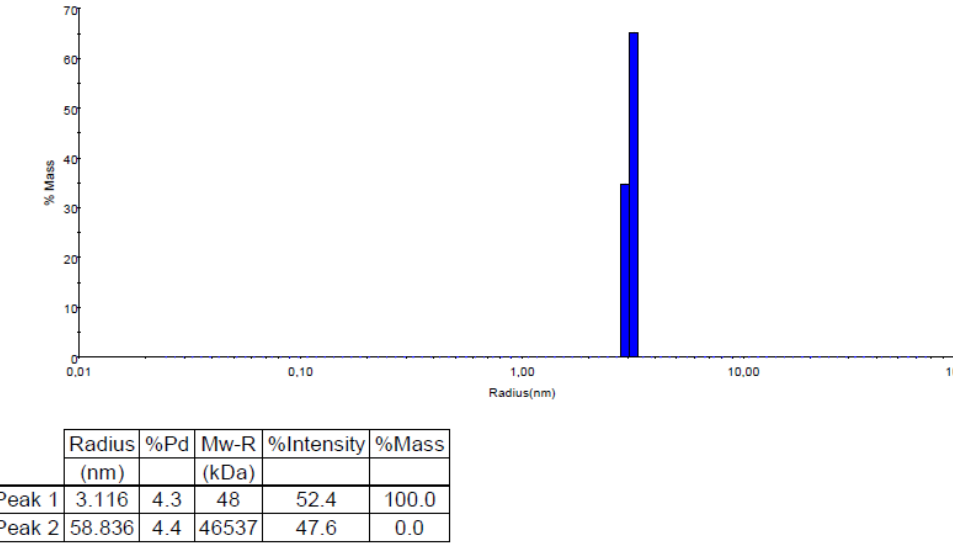
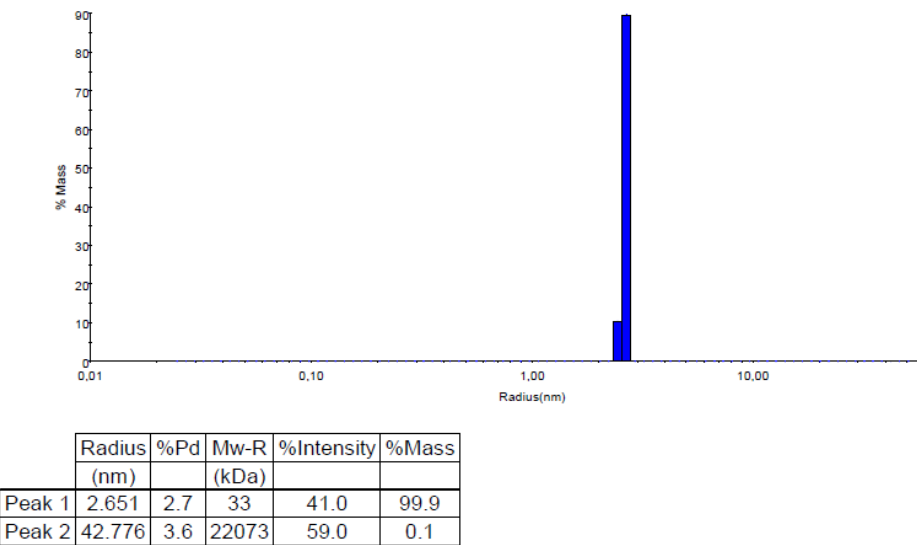
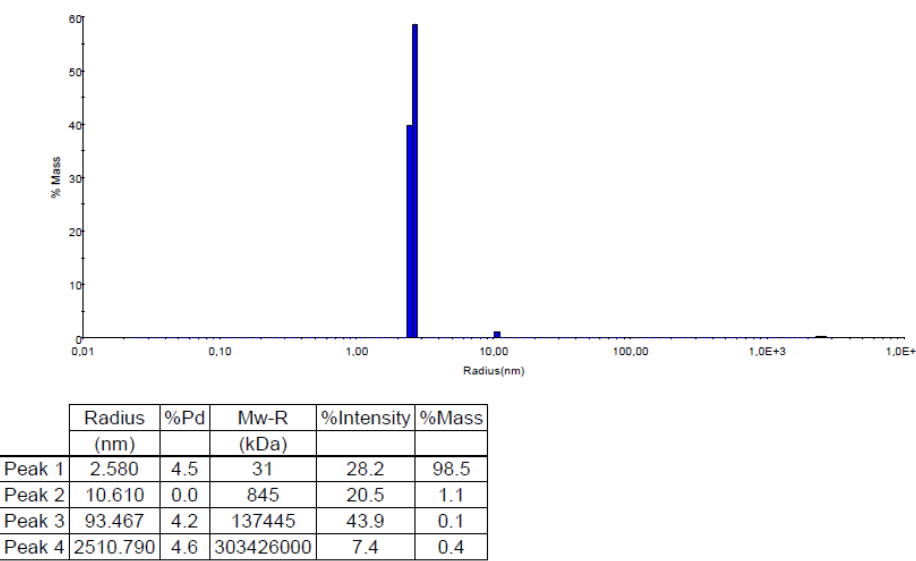


Detemir – hAmy-PEG Time 6 months

hAmypeg Ø



hAmypeg 100 µg/mL



hAmypeg 500 µg/mL

