

**pH-Responsive polymer based on dynamic imine bonds as a drug  
delivery material with pseudo target release behavior**

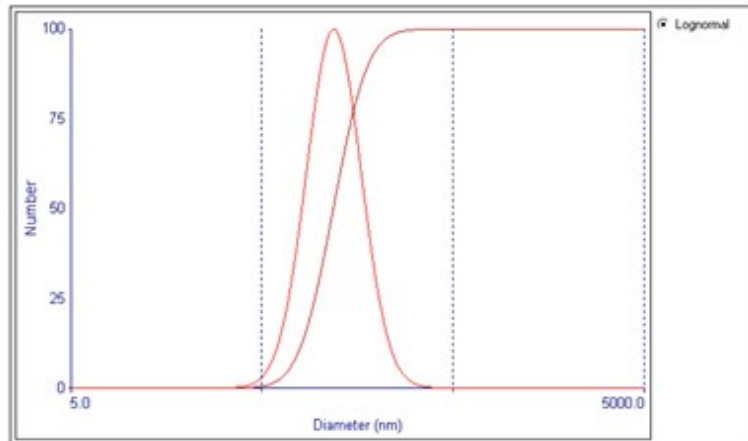
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Guangdong 510275, China. E-mail: [liusiw@mail.sysu.edu.cn](mailto:liusiw@mail.sysu.edu.cn)

# 1. DLS data of PETMP-AU-PEG

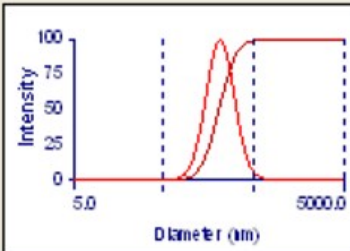
## BA (Combined)

**Effective Diameter:** 215.0 nm  
**Polydispersity:** 0.133  
**Avg. Count Rate:** 139.2 kcps  
**Baseline Index:** 7.0  
**Elapsed Time:** 00:02:30



| Run        | Eff. Diam. (nm) | Half Width (nm) | Polydispersity | Baseline Index |
|------------|-----------------|-----------------|----------------|----------------|
| 1          | 209.6           | 90.6            | 0.187          | 1.1            |
| 2          | 205.8           | 90.9            | 0.195          | 10.0           |
| 3          | 218.4           | 93.5            | 0.183          | 9.0            |
| 4          | 217.2           | 30.5            | 0.020          | 4.6            |
| 5          | 226.0           | 43.6            | 0.037          | 8.9            |
| Mean       | 215.4           | 69.8            | 0.124          | 6.7            |
| Std. Error | 3.5             | 13.5            | 0.039          | 1.7            |
| Combined   | 215.0           | 78.3            | 0.133          | 7.0            |

**Sample ID** BA (Combined)  
**Operator ID** lgy  
**Elapsed Time** 00:02:30  
**Median Diam.** 215.0 nm  
**Mean Diam.** 228.8 nm  
**Polydispersity** 0.133  
**GSD** 1.423



| d(nm) | G(d) | C(d) | d(nm) | G(d) | C(d) | d(nm) | G(d) | C(d) |
|-------|------|------|-------|------|------|-------|------|------|
| 120.3 | 26   | 5    | 196.6 | 97   | 40   | 272.7 | 80   | 75   |
| 136.7 | 44   | 10   | 205.6 | 99   | 45   | 289.4 | 70   | 80   |
| 149.1 | 58   | 15   | 215.0 | 100  | 50   | 309.9 | 58   | 85   |
| 159.7 | 70   | 20   | 224.8 | 99   | 55   | 338.0 | 44   | 90   |
| 169.5 | 80   | 25   | 235.1 | 97   | 60   | 384.3 | 26   | 95   |
| 178.7 | 87   | 30   | 246.3 | 93   | 65   |       |      |      |
| 187.7 | 93   | 35   | 258.7 | 87   | 70   |       |      |      |

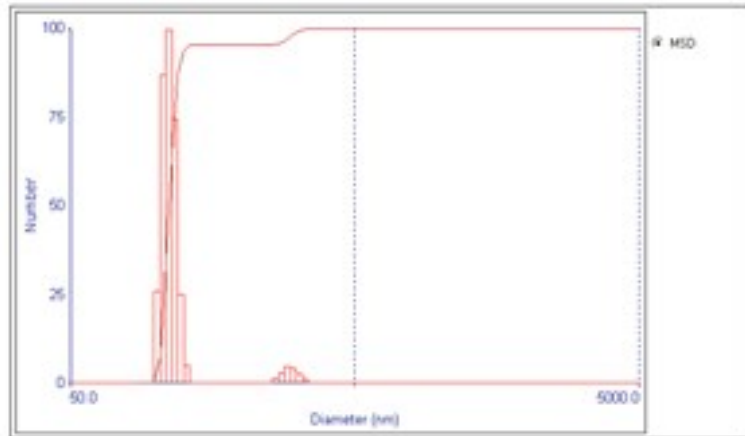
Intensity

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## 2. DLS data of DOX-loaded PETMP-AU-PEG

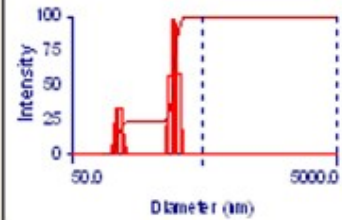
### BB (Combined)

**Effective Diameter:** 217.9 nm  
**Polydispersity:** 0.151  
**Avg. Count Rate:** 292.4 kcps  
**Baseline Index:** 5.7  
**Elapsed Time:** 00:02:30



| Run        | Eff. Diam. (nm) | Half Width (nm) | Polydispersity | Baseline Index |
|------------|-----------------|-----------------|----------------|----------------|
| 1          | 219.2           | 83.3            | 0.091          | 4.5            |
| 2          | 219.2           | 85.4            | 0.162          | 4.3            |
| 3          | 219.8           | 63.1            | 0.088          | 8.1            |
| 4          | 225.0           | 104.1           | 0.214          | 3.8            |
| 5          | 228.4           | 95.0            | 0.176          | 9.4            |
| Mean       | 217.8           | 82.2            | 0.146          | 6.1            |
| Std. Error | 3.3             | 8.3             | 0.025          | 1.2            |
| Combined   | 217.9           | 84.7            | 0.151          | 5.7            |

**Sample ID** BB (Combined)  
**Operator ID** lgy  
**Elapsed Time** 00:02:30  
**Mean Diam.** 252.5 nm  
**Rel. Var.** 0.101  
**Skew** -1.085



| d(nm) | G(d) | C(d) | d(nm) | G(d) | C(d) | d(nm) | G(d) | C(d) |
|-------|------|------|-------|------|------|-------|------|------|
| 87.5  | 0    | 0    | 148.2 | 0    | 24   | 250.8 | 0    | 24   |
| 91.8  | 0    | 0    | 155.4 | 0    | 24   | 263.1 | 20   | 28   |
| 96.3  | 0    | 0    | 163.0 | 0    | 24   | 276.0 | 57   | 41   |
| 101.0 | 5    | 1    | 171.0 | 0    | 24   | 289.5 | 100  | 63   |
| 106.0 | 22   | 6    | 179.4 | 0    | 24   | 303.7 | 96   | 84   |
| 111.2 | 34   | 13   | 188.2 | 0    | 24   | 318.6 | 59   | 96   |
| 116.6 | 33   | 20   | 197.4 | 0    | 24   | 334.2 | 17   | 100  |
| 122.3 | 14   | 23   | 207.1 | 0    | 24   | 350.6 | 0    | 100  |
| 128.3 | 3    | 24   | 217.3 | 0    | 24   | 367.8 | 0    | 100  |
| 134.6 | 0    | 24   | 227.9 | 0    | 24   | 385.8 | 0    | 100  |
| 141.2 | 0    | 24   | 239.1 | 0    | 24   | 404.8 | 0    | 100  |

Intensity

### 3. GPC data of PETMP-AU-PEG, in DMF

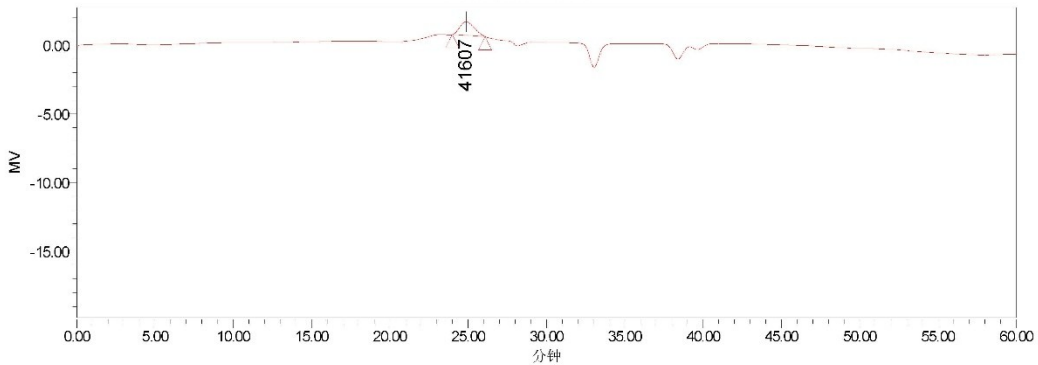


## GPC 缺省单个报告 报告

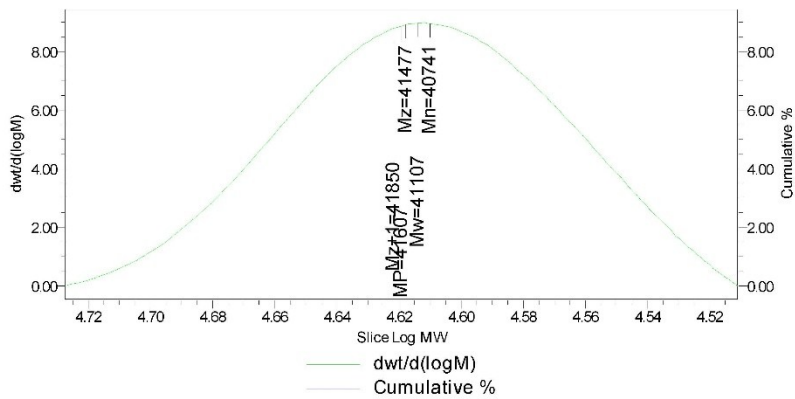
### 样品信息

|        |              |         |                        |
|--------|--------------|---------|------------------------|
| 样品名称:  | 107          | 采集者:    | System                 |
| 样品类型:  | 宽分布未知样       | 采集时间:   | 2016/8/26 11:59:04 CST |
| 瓶号:    | 107          | 采集方法组:  | wuyunan                |
| 进样次数:  | 1            | 处理日期:   | 2016/8/26 19:59:04 CST |
| 进样体积:  | 50.00 ul     | 处理方法:   | y                      |
| 运行时间:  | 60.0 Minutes | 通道名称:   | 410                    |
| 样品组名称: | change       | 处理通道注释: | 410                    |

自动缩放色谱图



— 样品名称 107; 样品瓶 107; 进样 1; 通道 410; 采集日期 2016/8/26 11:59:04 CST



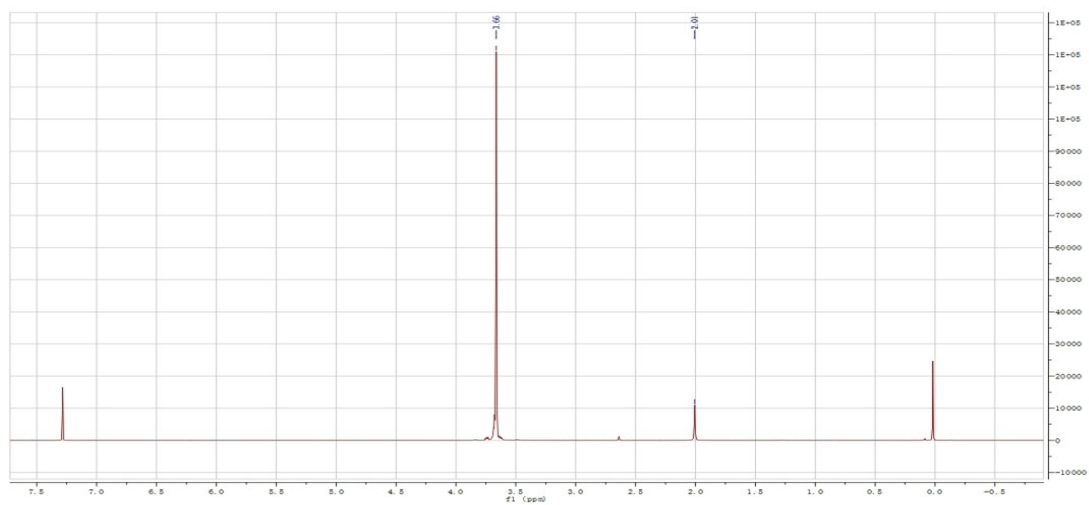
### GPC 结果

| 分布名称 | Mn    | Mw    | MP    | Mz    | Mz+1  | Mv | 多分散性     | MW标记1 | MW标记2 |
|------|-------|-------|-------|-------|-------|----|----------|-------|-------|
| 1    | 40741 | 41107 | 41607 | 41477 | 41850 |    | 1.008973 |       |       |

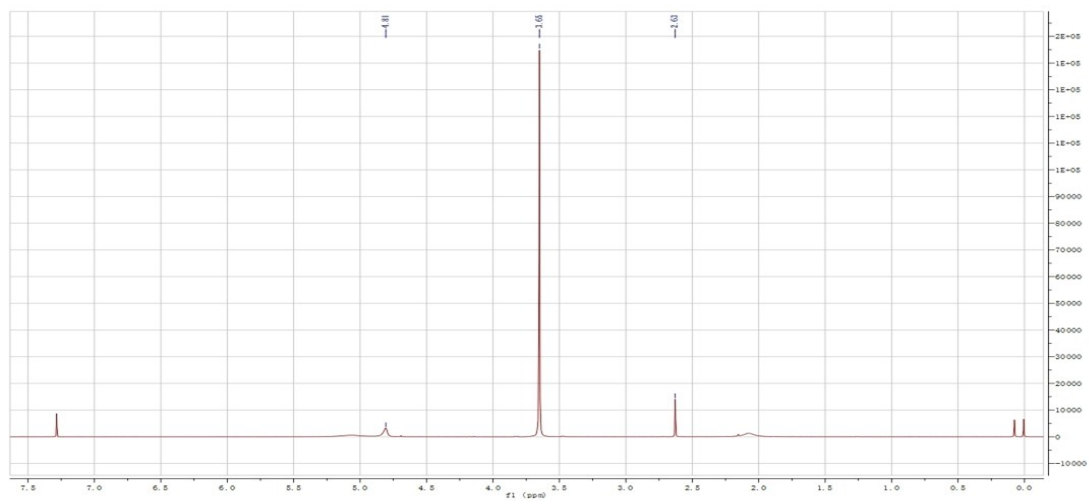
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 报告方法: GPC 缺省单个报告  
 报告方法 ID: 104; 1042  
 页码: 1 (共计 1)

项目名称: wuyunan  
 打印日期:  
 2016/8/26  
 20:00:00 PRC

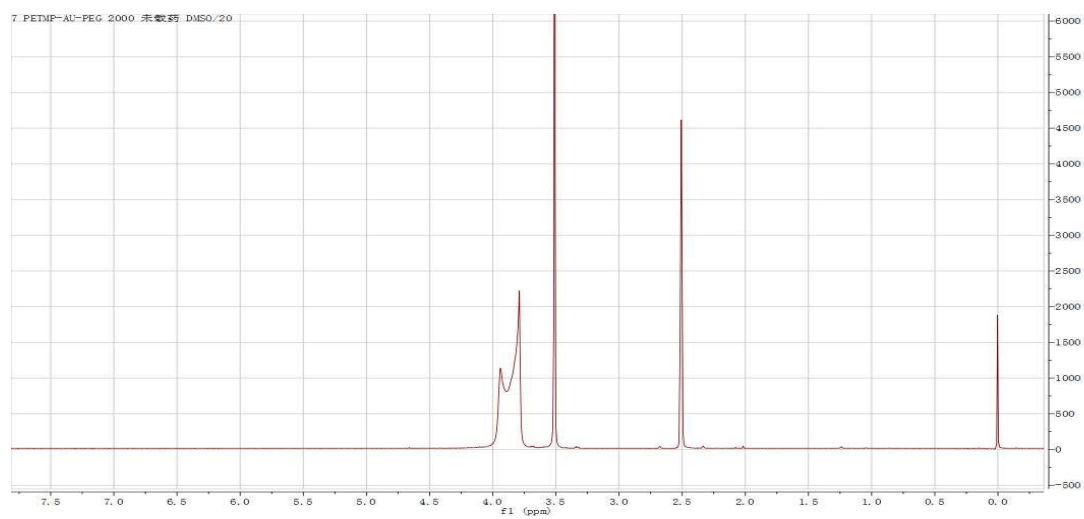
#### 4. $^1\text{H}$ NMR



$^1\text{H}$  NMR of PEG2000 in  $\text{CDCl}_3$



$^1\text{H}$  NMR of ALD-PEG2000-ALD in  $\text{CDCl}_3$



$^1\text{H}$  NMR of PETMP-AU-PEG2000 in  $\text{DMSO}$