H2O2 实验记录

200528 后测法

自配amplex red (10 ul)

借来的HRP (20 ul)

50 mM Na buffer (970 ul)\_\_\_\_1ml working solution

H2O2 stock solution (22.7 ul 3% H2O2 +977 50 mM Na buffer) 1ml 20 mM solution

|  |  |  |
| --- | --- | --- |
| standard | mM |  |
| standard | 5 | 0.160 |
| standard | 10 | 0.216 |
| standard | 15 | 0.244 |
| standard | 20 | 0.257 |
|  |  | Abs(571nm) |
| CuBTT | #01 |  |
| CuBTT | #04 |  |
| CuBTT | #05 | 0.007 |
| CuBTT DMPC | #21 | 0.097 |
| CuBTT | #02 | 0.162 |
| CuBTT DMPC | #17 |  |
| CuBTT | #01 |  |
| CuBTT DMPC | #10 |  |
| CuBTT DMPC | #19 |  |
| CuBTT | #02 | 0.003 |
| CuBTT DMPC | #17 | 0.003 |
| CuBTT DMPC | #19 |  |
| CuBTT DMPC | #22 | 0.001 |

感觉上 #02可以作为有效数据 但是对比标准曲线 相当于5mm 的浓度 太大不现实 所以先不取

200602 new HRP 后测法

|  |  |  |
| --- | --- | --- |
|  |  | Abs |
| #02 | CuBTT 3ml | 0.008 |
| #04 | CuBTT 3ml | 0.089 |
| #05 | CuBTT 1.5ml | 0.096 |
| #06 | CuBTT 1.5ml | 0.114 |
| #10 | DMPC 1.5ML | 0.014 |
| #11 | DMPC 1.5ML | 0.033 |
| #12 | DMPC 3ML | 0.025 |
| #19 | DMPC 3ML | 0.014 |
| #22 | DMPC 3ML | 0.012 |
| #54 | DMPC 1.5ML | 0.006 |
|  |  |  |

20200616

OPD 做reagent测试CuBTT的H2O2的量

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| **#** |  | **v/ml** | **Abs** | **cal Abs** |
| 1 | DI water |  |  |  |
| 2 | #01 CuBTT OPD in solution | 2 | 0.057 | 0.042 |
| 3 | #02 CuBTT OPD in solution | 2 | 0.08 | 0.065 |
| 4 | #04 CuBTT OPD after cv | 2 | 0.033 | 0.018 |
| 5 | #06 CuBTT OPD after cv | 2 | 0.051 | 0.036 |
| 6 | working solution +buffer | 2 | 0.015 |  |

1. Working solution即使避光 还是会变色 不利于测吸光度
2. After CV之后再测的结果明显要小一些 所以以后的uv统一都是在溶液中一起测
3. 此实验还没有做control实验 没有判断加入OPD后对ORRcv的影响 看着是有影响的 所以这也是不用OPD的原因之一

20200617

30% 和3%的溶液的标准曲线

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| **#** | **Name** | **mM** | Cal mM | Abs |
| 1 | Blank 1 |  |  |  |
| 2 | 30% H2O2 | 0.001 | 0.0005 | 0.036 |
| 3 | 30% H2O2 | 0.002 | 0.001 | 0.086 |
| 4 | 30% H2O2 | 0.005 | 0.0025 | 0.163 |
| 5 | 30% H2O2 | 0.010 | 0.005 | 0.364 |
| 6 | 3% H2O2 | 0.001 | 0.0005 | 0.024 |
| 7 | 3% H2O2 | 0.002 | 0.001 | 0.075 |
| 8 | 3% H2O2 | 0.005 | 0.0025 | 0.174 |
| 9 | 3% H2O2 | 0.010 | 0.005 | 0.344 |

* 相差不大
* 更正了一个错误 真正测量的时候 H2O2的浓度会被稀释一倍 因为是和working solution 1:1 反应的

20200618 OPD standard curve 失败

|  |  |  |
| --- | --- | --- |
| **mM** | **Cal mM** | **Abs** |
| 0 | 0 | 0.000 |
| 0.001 | 0.0005 | -0.014 |
| 0.002 | 0.001 | -0.021 |
| 0.005 | 0.0025 | 0.020 |
| 0.01 | 0.005 | 0.023 |
| 0.02 | 0.01 | -0.023 |
| 0.05 | 0.025 | 0.006 |
| 0.1 | 0.05 | 0.005 |
|  | 0 | 0.022 |
|  | 0 | 0.006 |
| 0 | 0 | 0.000 |
| 0.001 | 0.0005 | -0.004 |
| 0.002 | 0.001 | -0.007 |
| 0.005 | 0.0025 | 0.016 |
| 0.01 | 0.005 | 0.030 |
| 0.02 | 0.01 | 0.028 |
| 0.05 | 0.025 | 0.010 |
| 0.1 | 0.05 | 0.040 |

* 乱七八糟的线
* 原因 working solution颜色一直变化
* 测量时间无法确定

20200619 FeBTT CoBTT NiBTT