



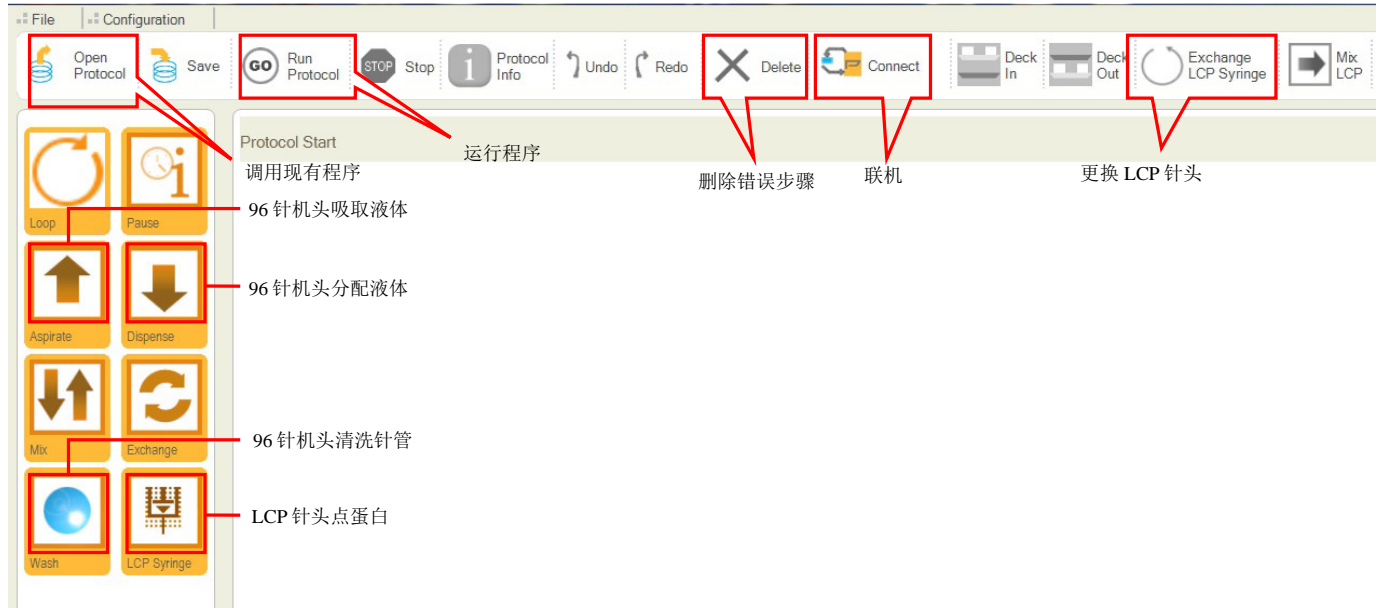
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## Gryphon-LCP 使用简介:

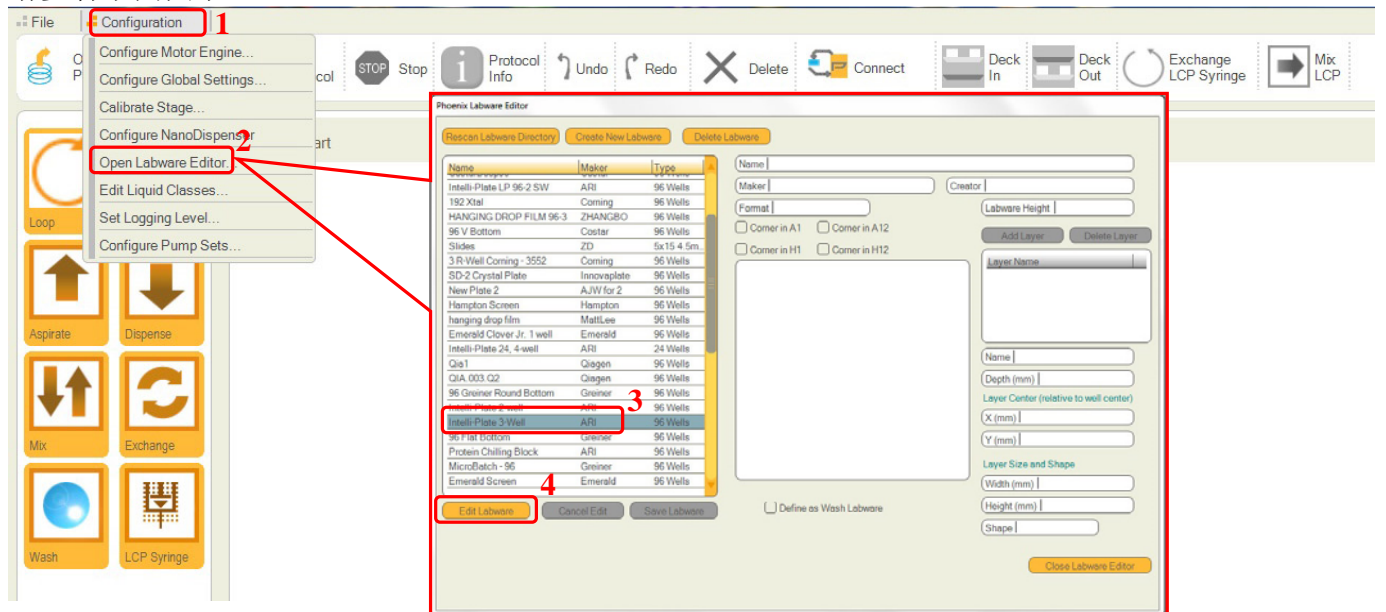
本文以举例形式对 Gryphon 应用软件的使用进行说明。

内容为在 Intelli-Plate 3 well 结晶板点蛋白和加池液的操作过程，如果您需要获得完整的使用说明，请参看用户手册。

以下为应用软件的操作界面及此次用到功能的说明



如果首次使用 Intelli-Plate 3-well 结晶板，需要查看软件中是否已经对其进行了正确定义，具体方法请参看下面图示





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当选择“Edit Labware”后，会出现如下界面，显示了对应结晶板得具体参数。如果您使用的是其他类型结晶板，可以依据下面说明进行设置。对应结晶板的具体参数需要从供货商处获得。

Phoenix Labware Editor

Rescan Labware Directory   Create New Labware   Delete Labware

定义板子名称和进行一些注释

Name Intelli-Plate 3-Well

Maker ARI   Creator ARI

Format 96 Wells   定义结晶板高度   Labware Height 14.3

Corner in A1    Corner in A2    Corner in A3    Corner in A4

Corner in H1    Corner in H2    Corner in H3    Corner in H4

添加/删除孔位   Add Layer   Delete Layer

Layer Name
Reservoir
Well 3
Well 2
Well 1

选中某孔位时，确认 / 编辑具体的参数

Name Well 3

Depth (mm) 1.6

Layer Center (relative to well center)

X (mm) -2.6

Y (mm) -2.5

Layer Size and Shape

Width (mm) 2

Height (mm) 2

Shape Round

Define as Wash Labware

Edit Labware   Cancel Edit   Save Labware

Close Labware Editor

确认参数设定正确后，选择“Save Labware”然后“Close Labware Editor”



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第一步：首先点击“Protocol Start”，进行所有结晶板、水槽、玻璃片等的设定。

点中“Protocol Start”后，屏幕右侧出现相应的设置界面

Name	Maker	Type
192 Xtal	Corning	96 Wells
3 R-Well Corning - 35...	Corning	96 Wells
3 R-Well Corning - 96	Corning	96 Wells
96 Block 1/2 Height	Greiner	96 Wells
96 Costar	Costar	96 Wells
96 Flat Bottom	Greiner	96 Wells
96 Greiner Round Bott...	Greiner	96 Wells
96 V Bottom	Costar	96 Wells
Corning 5 well round...	Corning	96 Wells
CostarDeep96	Costar	96 Wells
CrystalQuick - Round	Greiner	96 Wells
CrystalQuick - Square	Greiner	96 Wells
CrystalQuick LP	Greiner	96 Wells

3号位置**必须**设定为水槽  
Wash - Flow Thru

1号位置设定为池液来源  
示例: Deep Well - 1 ml

2号位置设定为结晶板  
Intelli - Plate 3 - Well

6号位置**一般**设定为玻璃板  
Pre Dispense Slide 1mm

当找到需要的板子时，用鼠标左键将该选项拖动到对应板子的位置即可

Name	Maker	Type
Intelli-Plate 3-Well	ARI	96 Wells
Intelli-Plate 3-Well LP	ARI	96 Wells
Intelli-Plate 96-2 SW	ARI	96 Wells
Intelli-Plate LP 96-2 SW	ARI	96 Wells
Intelli-Plate-Flat	ARI	96 Wells
Laminex Glass Base	MD	96 Wells
Marienfeld Glass Base	MAR	96 Wells
MicroBatch - 96	Greiner	96 Wells
Pre Dispense Slide 1...	ARI	5x15 4.5m...
Protein Chilling Block	ARI	96 Wells
QIA 003.Q2	Qiagen	96 Wells
Qia1	Qiagen	96 Wells
Qiagen Deep Well	Qiagen	96 Wells
Reservoir	Nunc	96 Wells



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第二步：拖动 **Asprate** 图标到窗口中间，会有新条目出现，条目上方出现的红色提示为错误提示，需要依据提示进行参数输入，此处提示为：未定义托盘和液体类型。  
此处设定吸取池液为 40uL

The screenshot shows the Bioray software interface. At the top, there is a menu bar with 'File' and 'Configuration'. Below it is a toolbar with icons for 'Open Protocol', 'Save', 'Run Protocol', 'Stop', 'Protocol Info', 'Undo', 'Redo', 'Delete', 'Connect', 'Deck In', 'Deck Out', 'Exchange Solo Syringe', and 'Mix LCP'. On the left side, there is a vertical toolbar with icons for 'Loop', 'Pause', 'Aspirate', 'Dispense', 'Mix', 'Exchange', 'Wash', 'Solo Aspirate', and 'Solo Dispense'. The main area is titled 'Protocol Start' and contains a warning message: 'No tray defined Unknown liquid class' and 'Aspirate 0  $\mu$ l'. Below the warning, there is a large red-bordered box representing the 'Aspirate' configuration window. This window has a central area with a purple circle and the letter 'A' next to it, labeled '1'. Below this area are several input fields: 'Volume ( $\mu$ l)' set to 40, 'Air Gap' with 'Volume ( $\mu$ l)' set to 0, 'Pre-dispense' checkbox, 'Number' set to 0, 'Above Bottom (mm)' set to 0, and 'Liquid Class' set to 'Water'. A red-bordered box highlights the 'Volume ( $\mu$ l)' field. A red-bordered box highlights the 'Pre-dispense' checkbox and 'Number' field, with a text box containing the Chinese text: '图示两个位置的参数必须选择。' (The parameters at these two positions must be selected). On the right side of the interface, there is a 'Deck' area with icons for 'Wash Fluoro', 'Intelli-Plate 3-Well', 'Pre Dispense Slide Trimm', and 'Deep Well - 1 ml'. A red-bordered box highlights the 'Deep Well - 1 ml' icon, with a text box containing the Chinese text: '点击 1 号托盘，则 96 针机头会从 1 号托盘取液' (Clicking the 1st tray, the 96-pin head will take liquid from the 1st tray). Below the 'Deck' area, there is another configuration window for the 'Deep Well - 1 ml' tray, with fields for 'Volume ( $\mu$ l)' set to 0, 'Air Gap' with 'Volume ( $\mu$ l)' set to 0, 'Pre-dispense' checkbox, 'Volume ( $\mu$ l)' set to 0, 'Number' set to 0, 'Above Bottom (mm)' set to 0, and 'Liquid Class' set to 'Water'. A red-bordered box highlights this entire configuration window.



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第三步：拖动 Dispense 图标到窗口中间，会有新条目出现，需要设定将 20uL 池液分配到储液槽中。

首先选择分液目的地为 2 号托盘。

选择池液分配位置

确认分配体积和液体类别

第四步：拖动 Solo Dispense 图标到窗口中间，会有新条目出现，需要设定将 0.2uL 蛋白分配到结晶孔中。

此处用于选择 LCP 点样的位置。

此处设定蛋白点样的位置

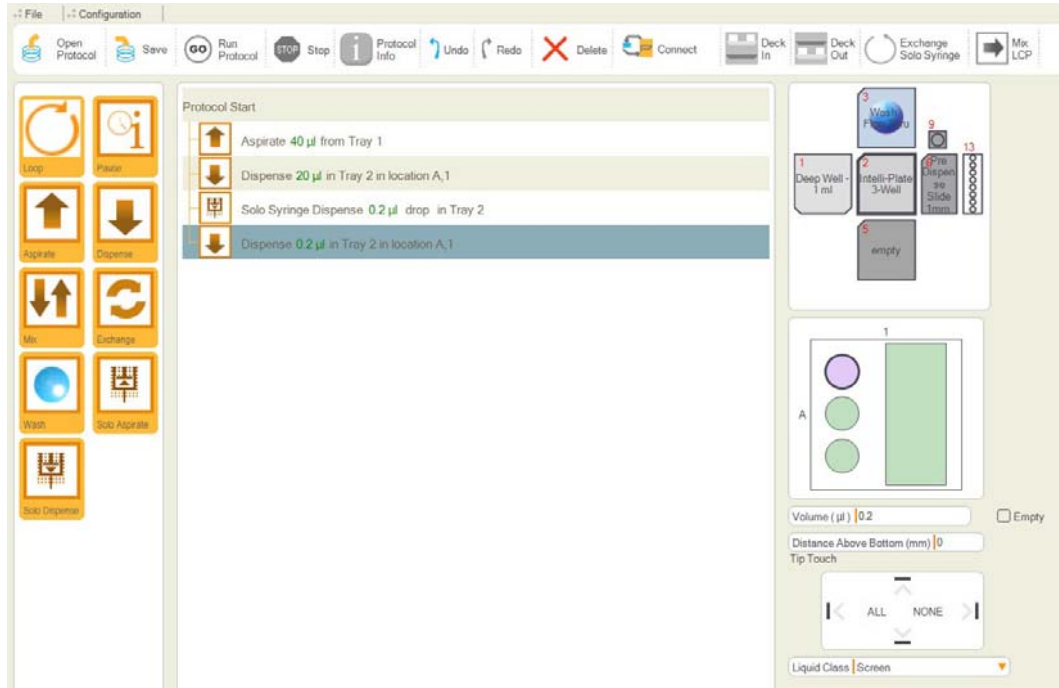
此处输入蛋白的数量、液体类别等参数



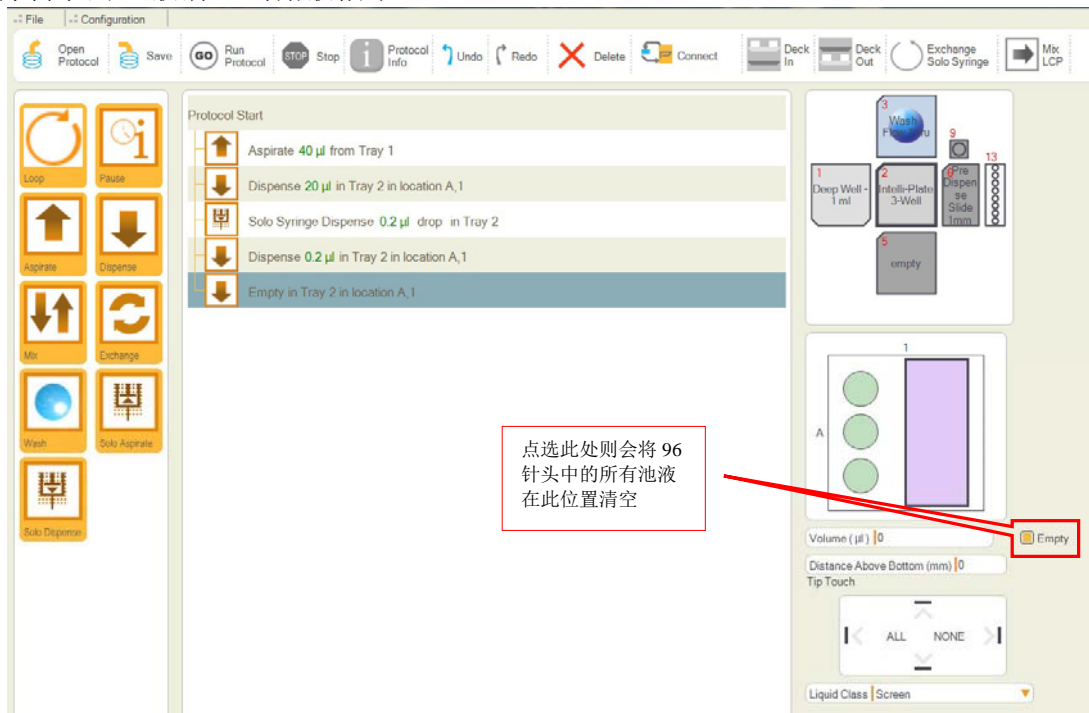
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第五步：仿照第三步，在已经点入蛋白的结晶孔中点入池液 0.2uL。

*注意：为防止交叉污染，通常是在结晶孔中先点蛋白，后点池液。*



第六步：将剩余的池液清空到储液槽中。





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第七步：当上述操作完成后，点样工作就已经完成了。但是，还需要添加一步清洗，使设备回复最佳状态。

The screenshot displays the Bioray software interface. The 'Protocol Start' list includes the following steps:

- Aspirate 40  $\mu\text{l}$  from Tray 1
- Dispense 20  $\mu\text{l}$  in Tray 2 in location A,1
- Solo Syringe Dispense 0.2  $\mu\text{l}$  drop in Tray 2
- Dispense 0.2  $\mu\text{l}$  in Tray 2 in location A,1
- Empty in Tray 2 in location A,1
- Wash 2 times 45  $\mu\text{l}$  in Tray 3

The 'Wash' step is highlighted. A red box highlights the configuration parameters for this step:

- Number of Cycles: 2
- Volume ( $\mu\text{l}$ ): 45
- Distance Above Bottom (mm): 0
- Liquid Class: Water
- Fill Time (s): 5
- Empty Time (s): 5

A red callout box points to these parameters with the text: 清洗体积要大于吸液体积 5 $\mu\text{L}$ ，一般推荐循环次数为 5

当完成上述步骤后，本示例操作流程就编写完成了。