

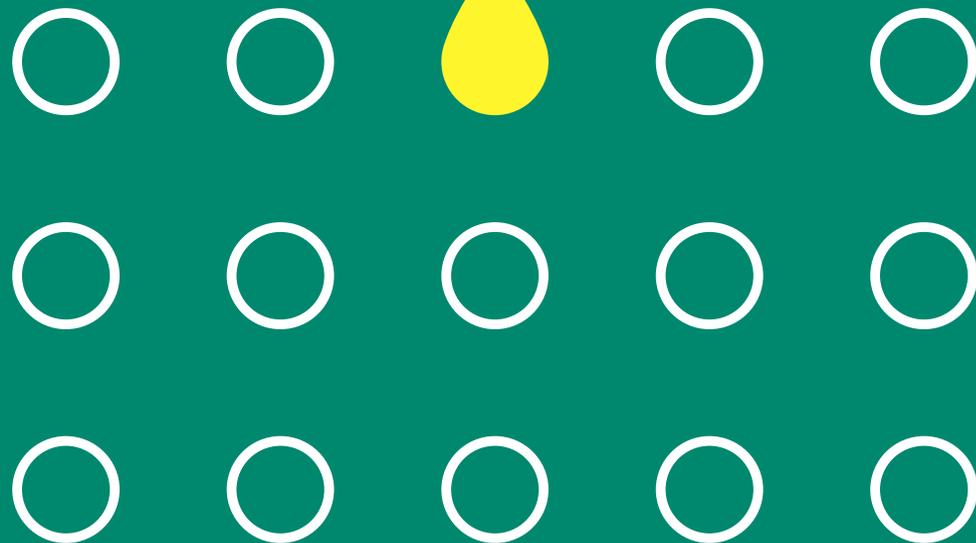
# 多光谱激光成像 Amersham Typhoon 培训

24 September 2020

于海宽

Cytiva (原GE医疗生命科学事业部)

成像产品技术支持



# Amersham Typhoon

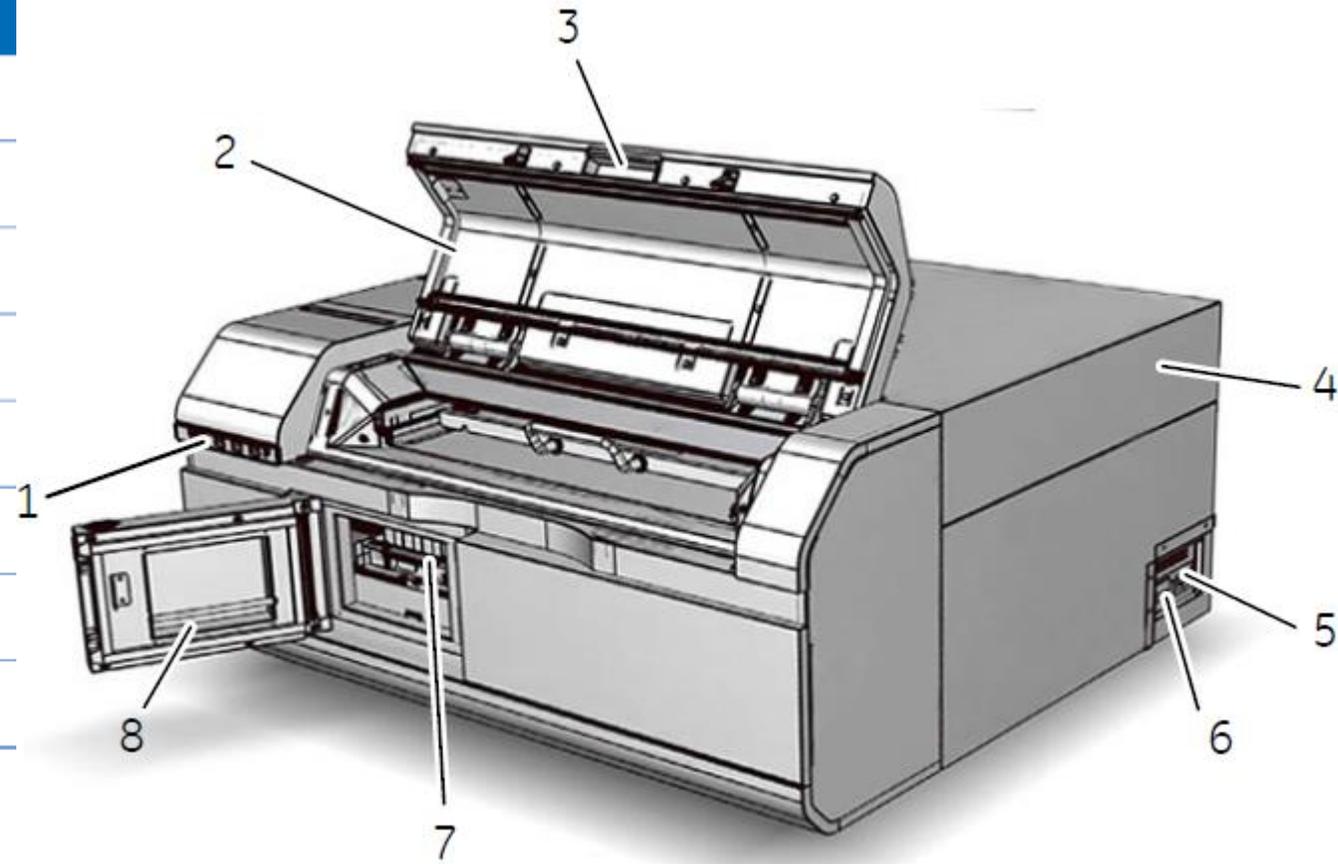
Part	Function
1	Amersham Typhoon scanner
2	Amersham Eraser
3	Amersham Cabinet

2和3为选配件

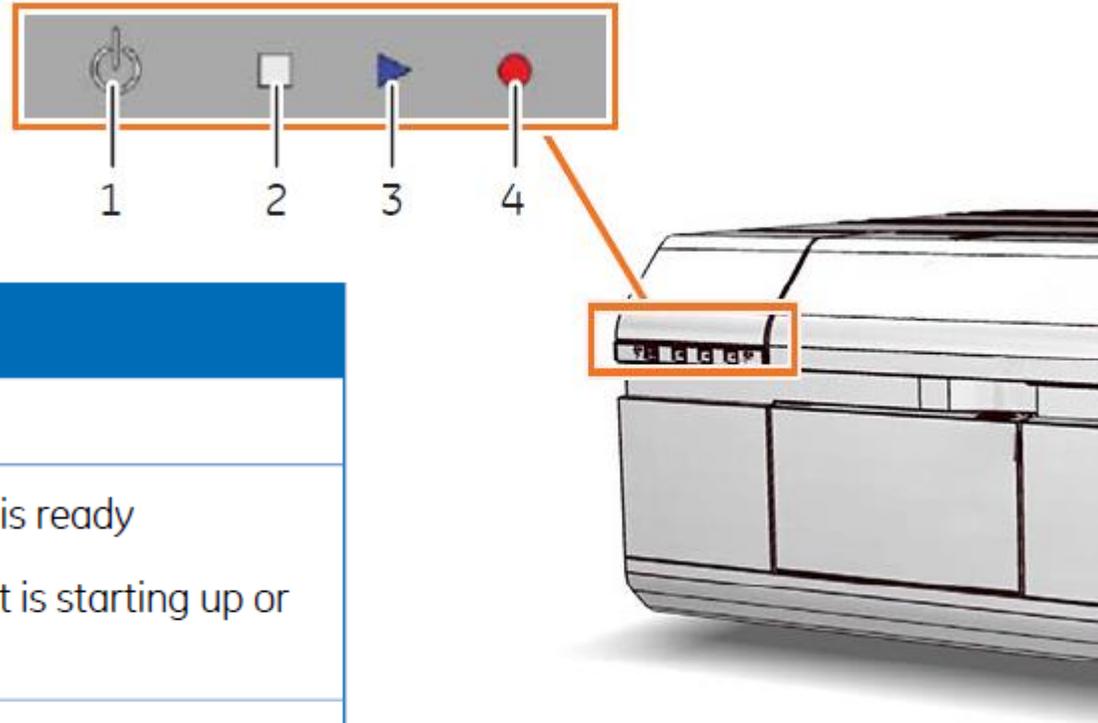


# Amersham Typhoon

Part	Function
1	Instrument panel
2	Main scanner door
3	Scanner door handle
4	Instrument cover
5	Power cord connector
6	Power switch
7	Filter module
8	Filter door



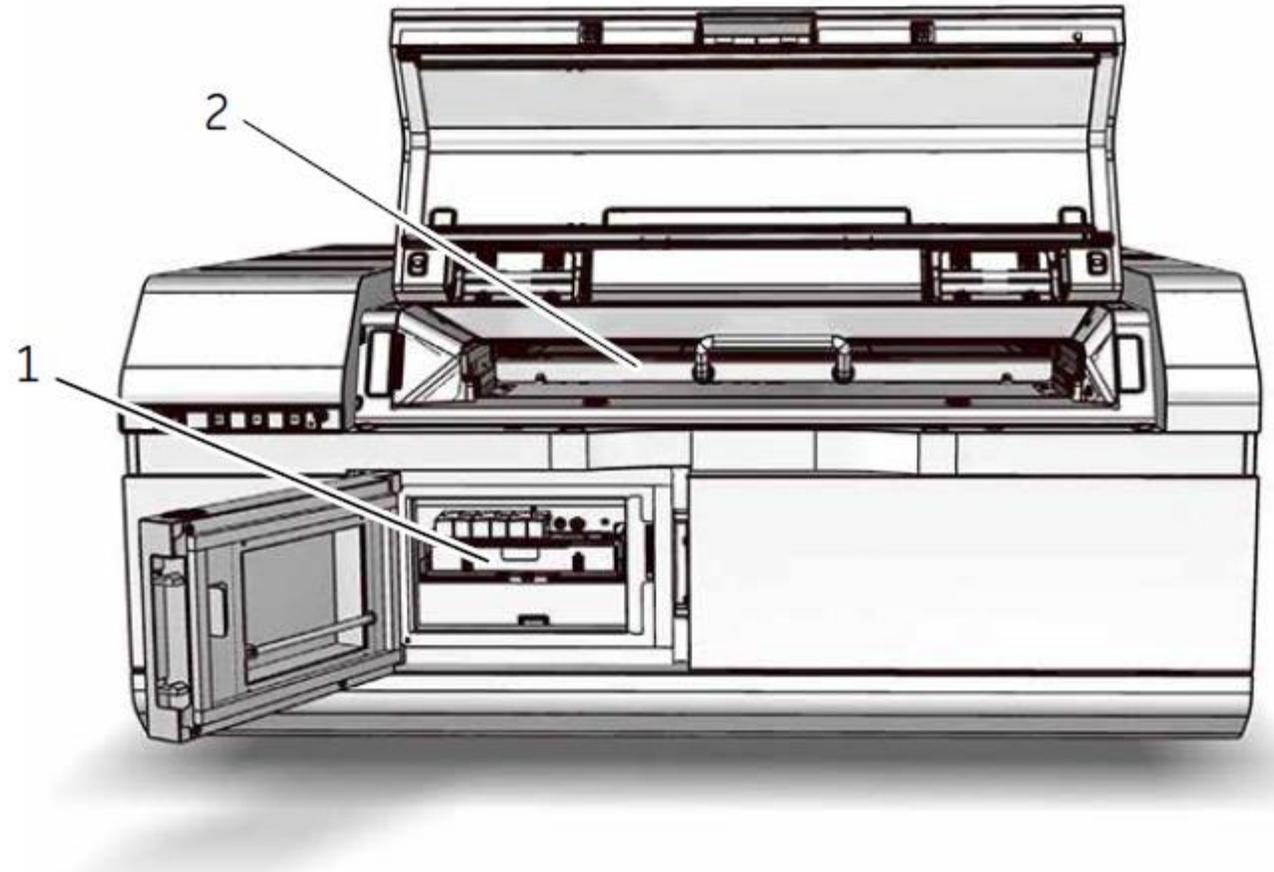
# Amersham Typhoon



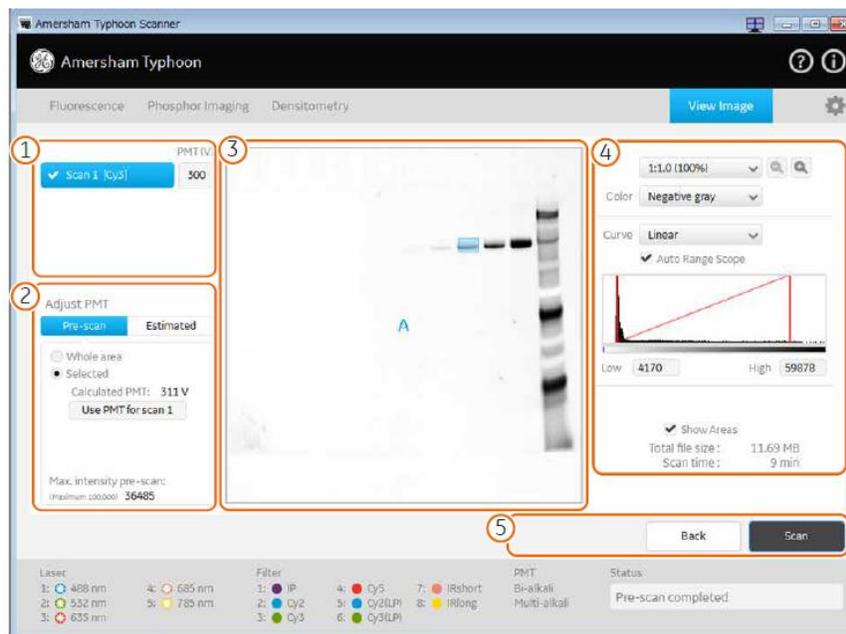
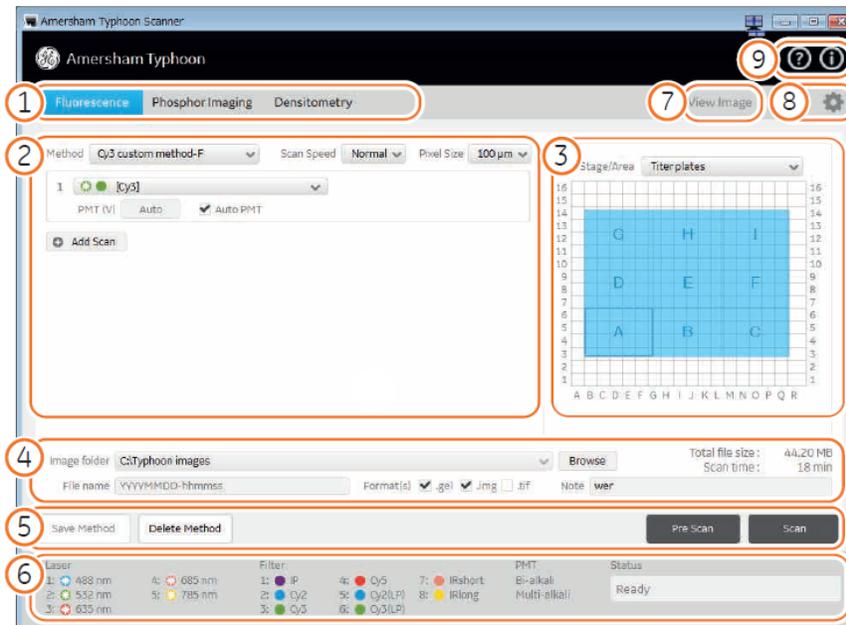
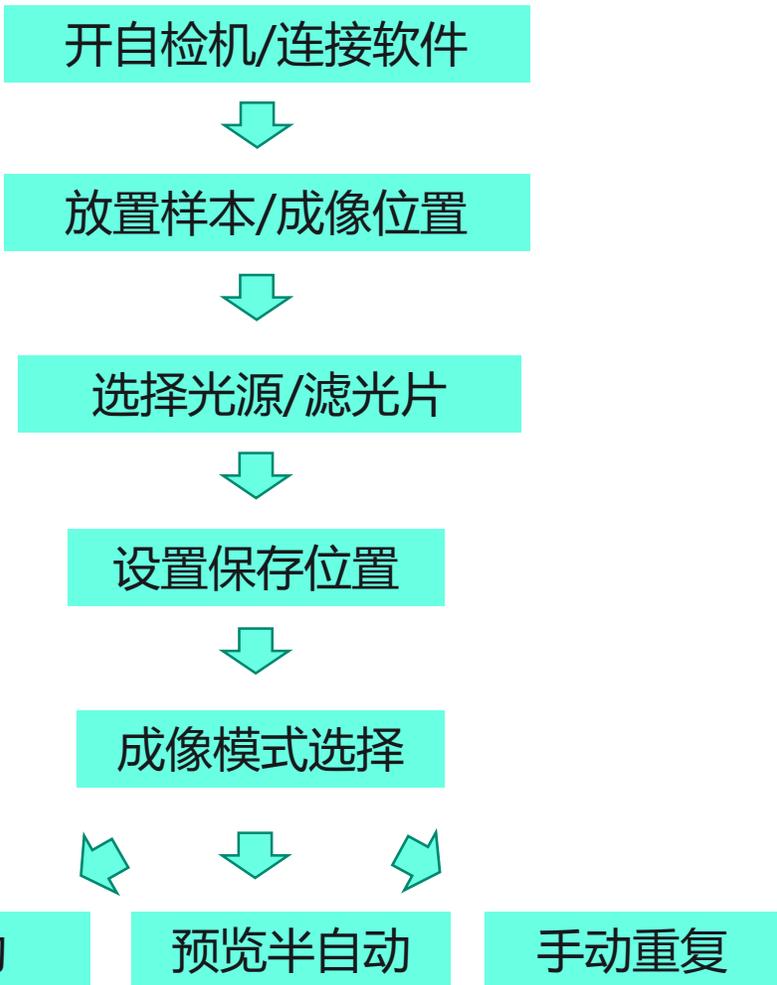
Part	Color	Function/status
1	White	On/Off button
2	White LED light	<ul style="list-style-type: none"><li>• If steady: Instrument is ready</li><li>• If flashing: Instrument is starting up or shutting down</li></ul>
3	Blue LED light	<ul style="list-style-type: none"><li>• The instrument is scanning, or</li><li>• The filters are being moved inside the scanner (after filter installation).</li></ul>
4	Red LED light	Error

# Amersham Typhoon

Part	Function
1	Filter module
2	Stage



# 操作流程



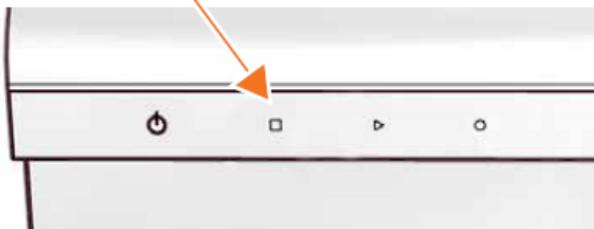
# 开机/关机

开机:

- 先打开主机右侧的总开关



- 哔声后, "Ready" 长亮



- 按前面电源开关, "Ready" 灯闪烁, 自检约5min

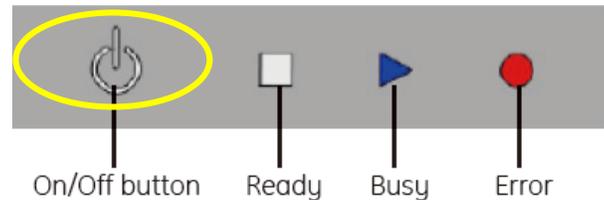


- 电脑上, 打开控制软件



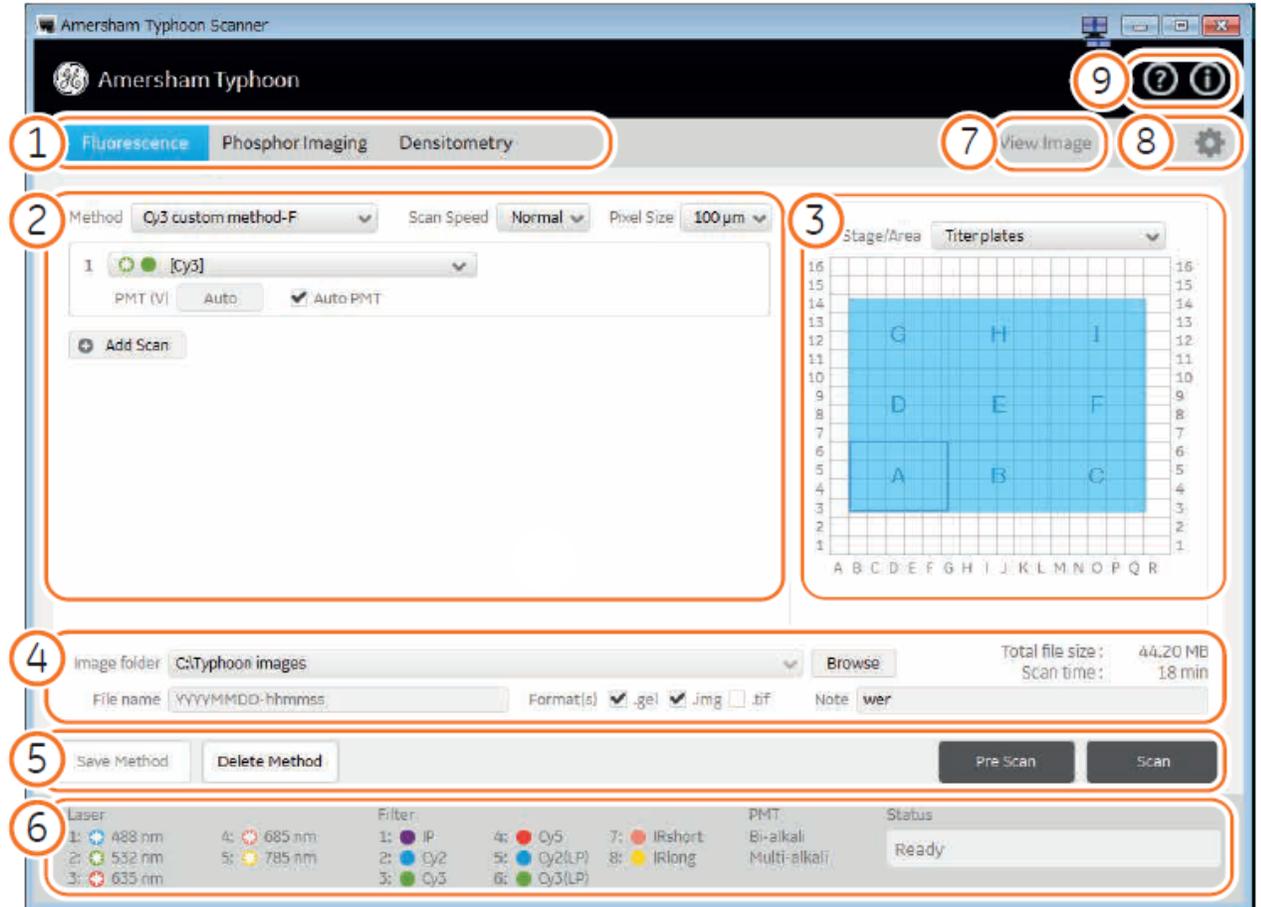
关机:

- 按住开关3秒, 指示灯闪烁后自动关闭。



# 设置界面说明-Start

- ① 选择功能  
荧光成像、磷屏成像、光密度测定
- ② 编辑方法:  
扫描速度 (常规/慢扫)  
分辨率 (10、25、50、100、200um)  
光源和滤光片  
检测器电压 (自动/手动250-1000V)  
扫描次数 (自动, ≤5次)
- ③ 样品位置和图像数量
- ④ 图像保存位置  
图像大小和扫描时间  
命名方式 (默认年月日)  
图像类型 (.gel-GE专用/img-原始数据/tif-16位通用)
- ⑤ 预览/扫描



# 设置界面说明-Start

- 扫描速度 (常规/慢扫)  
Slow: double time than Normal
- 分辨率 (10、25、50、100、200um)
- 光源和滤光片

Laser & Filter      Auto correction      Service

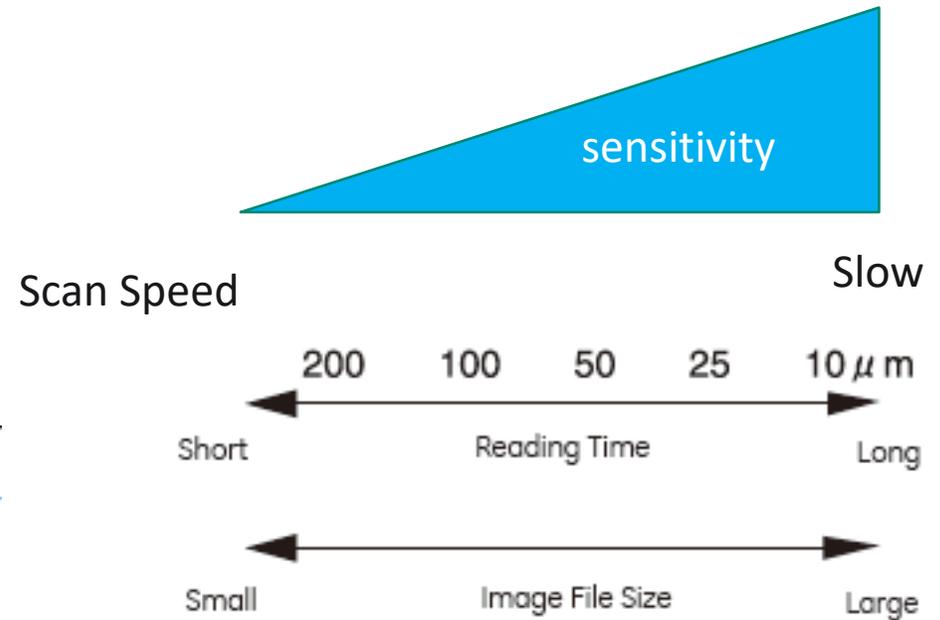
Laser & Filter ?

Name	Laser	Filter	PMT
[Cy2]	488 nm	Cy2 525BP20	Multi-alkali
[Cy3]	532 nm	Cy3 570BP20	Multi-alkali
[Cy5]	635 nm	Cy5 670BP30	Multi-alkali
[IRshort]	685 nm	IRshort 720BP20	Multi-alkali
[IRlong]	785 nm	IRlong 825BP30	Multi-alkali
[DarkScan]	--- none	--- Through	Bi-alkali
[DarkScan-M]	--- none	--- Through	Multi-alkali

Delete      Edit      Add

Cytiva

OK



Pixel Size: 10um ▼

Quality: 25um

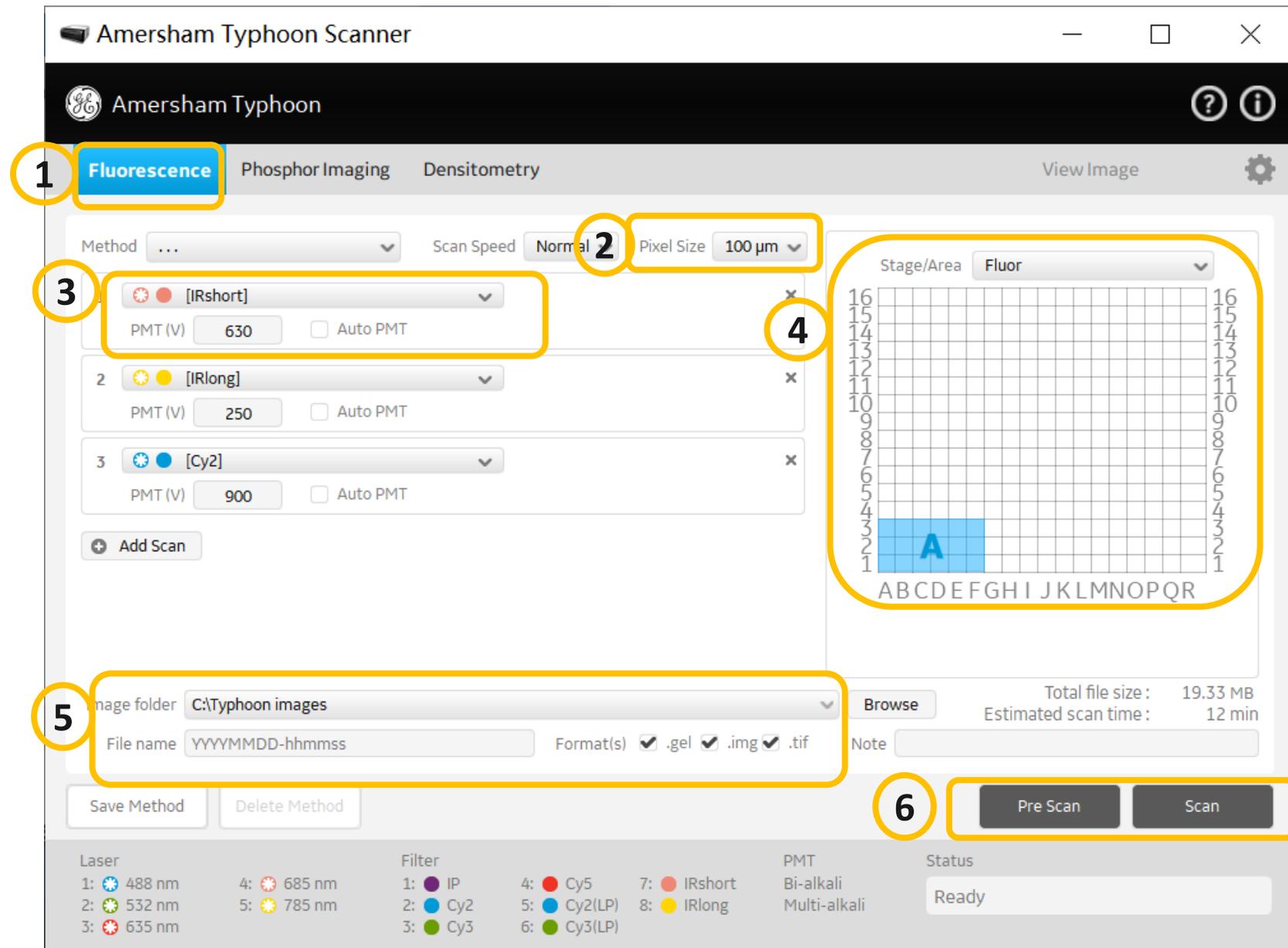
Auto: 50um

100um

200um

# 操作流程

- ① 选择荧光功能
- ② 选择像素尺寸：10、25、50、100、200um
- ③ 选择灵敏度：手动选择PMT电压250-1000V或Auto自动
- ④ 放置样本，选择成像区域
- ⑤ 设置存储路径及文件格式：.gel、.img、.tif
- ⑥ Scan



# Pre-Scan预扫模式

- ① 选择查看通道
- ② 选择Selected
- ③ 鼠标左键选择要参与PMT计算的区域，仪器自动给出Calculated PMT,将此PMT应用于Scan
- ④ 点击Scan

Amersham Typhoon Scanner

Amersham Typhoon

Fluorescence Phosphor Imaging Densitometry View Image

Scan	Channel	PMT (V)
✓ Scan 1	[IRshort]	630
✓ Scan 2	[IRlong]	250
✓ Scan 3	[Cy2]	900

Adjust PMT

Pre-scan Estimated

Whole area Selected

Calculated PMT: 1000 V

Use PMT for scan 3

Max. intensity pre-scan: (Maximum 100,000) 209

1:1.0 (100%)

Color Negative gray

Curve Linear

Auto Range Scope

Low 174 High 430

Show Areas

Total file size: 19.33 MB

Estimated scan time: 12 min

Back Scan

Laser

1: 488 nm	4: 685 nm
2: 532 nm	5: 785 nm
3: 635 nm	

Filter

1: IP	4: Cy5	7: IRshort
2: Cy2	5: Cy2(LP)	8: IRlong
3: Cy3	6: Cy3(LP)	

PMT

Bi-alkali Multi-alkali

Status

Pre-scans completed

# 分析软件演示

## Image Quant TL

- 培训资料:
- IQTL中文操作视频
- IQTL培训教材 P34



操作：打开图片---选择图形形状---自动圈定图像Autotrace---右键确定阈值Threshold  
---左键圈定图像---Next---选择Histogram Peak扣除背景---添加备注Annotate---导出图像

# 荧光成像

- 胶
- 膜
- 多孔板
- “三明治”胶 (Max. 33\*42cm)



# 维护和使用注意

- 托盘使用后，用蒸馏水或75%乙醇清洁，晾干
- 实验室温度不宜高于28°C
- 实验室湿度不宜超过75%
- 设备不宜放置阳光下
- 开机：二级电源管理 先打开右侧面下方的总开关，再按前面板二级开关
- 关机：按一下前面板开关，再关闭总关

# Thank you

于海宽

18117521170

Haikuan.yu@cytiva.com

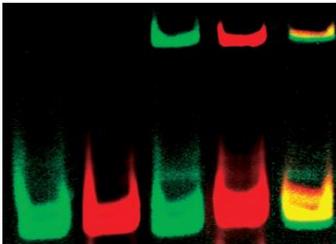
# 多光谱激光成像Amersham Typhoon培训

24 September 2020  
于海宽  
Haikuan.Yu@ge.com

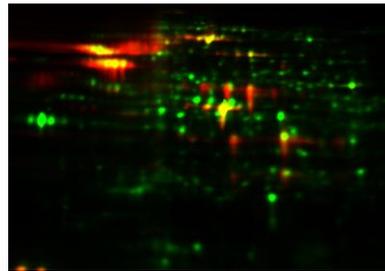


# Amersham Typhoon 多光谱激光成像系统

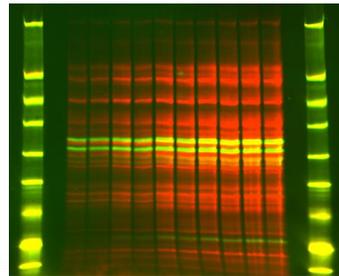
EMSA



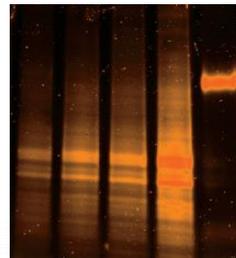
HCP覆盖率



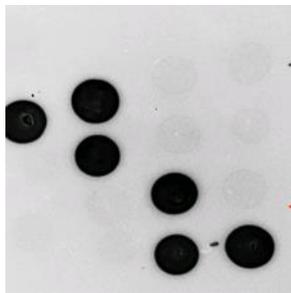
TPN WB



Click Chemistry

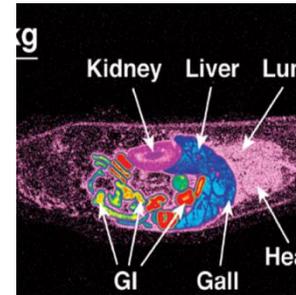


转基因  
植物筛选

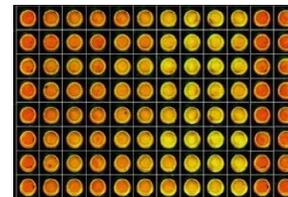


菌株筛选

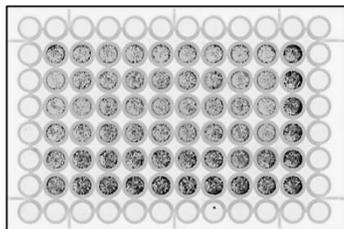
Cytiva



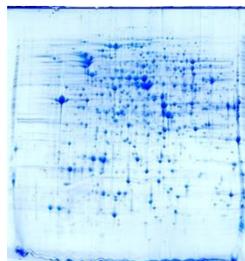
药物代谢



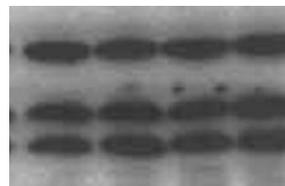
Cytoblots



细胞增殖检测



可见光检测



Southern,  
Northern Blotting