

ONLINE MONITORING and CONTROL QUESTIONNAIRE



Life Sciences
Data for Life.™

YSI Life Sciences
B84 0816

Fill out form
and click to print.



NAME

COMPANY

EMAIL

PHONE

PROCESS INFORMATION

1. Type of bioreactor process:

- Animal Cell Culture
- Insect Cell Culture
- Suspension Cell Culture
- Bacterial Fermentation
- Yeast Fermentation
- Fungal/Filamentous Bacterial Fermentation
- Continuous Process

Other

2. Cultivation Method:

- | | |
|-----------|-----------|
| Batch | Perfusion |
| Fed Batch | Chemostat |

Other

3. Process Duration:

- | | |
|-------------|-------------|
| ≤ 24 hours | 2 - 4 Weeks |
| 2 - 7 Days | > 4 Weeks |
| 1 - 2 Weeks | |

Other

4. Process Working Volume:

- | | |
|--------------|------------|
| ≤ 500 ml | 11 - 50 L |
| 500 ml - 1 L | 51 - 200 L |
| 2 - 5 L | > 200 L |
| 6 - 10 L | |

Other

5. Process Operating Pressure:

psi/bar

6. Fermentation/Cell Culture Media:

- Chemically Defined
- Complex
- Other

7. Maximum Cell Density:

OD/AU
Dry Cell Weight
Wet Cell Weight
cells/ml

8. What is the viscosity of your culture / fermentation?

- ≤ 1000 centipoise (cP)
- 1000 - 3000 cP

Other

9. Fermentation/Cell Culture Product Information:

- Intracellular
- Secreted

If secreted, what is the molecular entity ?

10. Will YSI be required to perform feed control?

- Yes
If yes, number of pumps/vessel
- No

Note : YSI feed control systems provide setpoint (feedback) control using either a PID control loop or simple threshold algorithm. For other feed control options, the YSI analyzer data can be communicated directly to your bioreactor controller or SCADA system using an analog signal (0-5V), RS-232 communication or ethernet (FTP).

VESSEL INFORMATION

1. Type of bioreactor system:

Stainless Steel stirred tank
Glass stirred tank
Single-use – stirred bag
Single-use – wave bag
Single-use – other
Airlift bioreactor
Hollow Fiber

Other

2. Make/Model of bioreactor system:

Sartorius
Eppendorf/New Brunswick
Eppendorf/Dasgip
Applikon
HyClone SUB/SUF
GE/Excellerex
Broadley-James

Other

3. Vessel Total Volume:

L

4. How many vessels will be sampled?

1 - 4
4 - 8

Other

5. What is the vessel sample port size and type?

12 mm Headplate
19 mm Headplate
19 mm Ingold
25 mm Ingold (standard - 40 mm port depth)
25 mm Ingold (safety - 52 mm port depth)
Sanitary Fitting (1.5 inch tri-clamp)

Other

6. What type of sample interface will the vessel have?

Filtration Sample Probe (cell-free sampling)
Dip Tube (cell-containing sampling)

Other

Note : As a best practice, YSI recommends the use of a filtration sample probe to prevent cell metabolism of the process sample as well as ensure bioreactor sterility.

7. What will be the maximum distance between the vessel and the YSI analyzer?

< 5 feet (1.5 meters)
5 - 10 feet (1.5 - 3.0 meters)

Other

8. What are the vessel sterilization/cleaning requirements?

Steam-in-place
Clean-in-place
Autoclave

Other



a xylem brand

Life Sciences
Data for Life.™

PROCESS ANALYTICAL INFORMATION

1. What analytes will be monitored by the YSI analyzer? Check all that apply:

Glucose	Glutamine
Sucrose	Ethanol
Fructose	Methanol
Lactose	Glycerol
Galactose	Choline
Xylose	Ammonium
Lactate	Potassium
Glutamate	Hydrogen Peroxide

2. How frequently will the vessel need to be sampled?

- < 15 minutes
- 15 minutes
- 30 minutes
- 60 minutes
- 1 - 4 times per day

Other

3. Will manual samples be analyzed using the same instrument as the automated samples?

- Yes
- No

4. Will sample dilution be required prior to conducting sample analysis ?

- Yes
- No

5. If yes on #4, what dilution factor will be used?

Dilution factor =

X

DATA MANAGEMENT INFORMATION

1. What type of bioprocess management/SCADA system will be used for process monitoring and control?

- Sartorius BioPAT MFCS/win
- New Brunswick Biocommand
- Dasgip Dasware
- Applikon BioXpert
- Delta V
- Other

2. Does the process management/SCADA system have an OPC server or OPC client?

- Yes - OPC Server
- Yes - OPC Client
- No

3. Does the process management/SCADA system have other I/O communication options?

- Yes - analog 0-5V
- Yes - RS-232
- Yes - ethernet (TCP/IP or FTP)

4. Would you like the YSI analyzer to integrate the real-time analytical data into your bioprocess management or SCADA system?

- Yes
- No

ADDITIONAL COMMENTS:

YSI.com/lifesciences



a xylem brand

Life Sciences
Data for Life.™

YSI Life Sciences | 1725 Brannum Lane | Yellow Springs, Ohio 45387
Tel +1.800.659.8895 | +1.937.767.7241 | support@ysi.com

© 2016 Xylem, Inc. All rights reserved. B84 0816