

# Pi Technical Note 32

## LabSense Application Questionnaire

Pi are committed to ensuring that you get the best experience from your LabSense. To ensure that the LabSense is suitable to meet your coagulation control objectives we need the following information to get every installation right first time, every time. When you have completed the form please email it to your local sales organization or direct to the factory.

### Contact Info

Name.....  
 E-mail.....  
 Mobile No.....  
 Plant Name.....  
 Town.....  
 Country.....  
 Date.....



### Application

1. Raw Water Data (please indicate units e.g. MGD, m<sup>3</sup>/hr, ml/min, etc.):

Flow	Typical: _____	Min: _____	Max: _____
Alkalinity	Typical: _____	Min: _____	Max: _____
pH	Typical: _____	Min: _____	Max: _____
TOC/UVA	Typical: _____	Min: _____	Max: _____
Turbidity (NTU)	Typical: _____	Min: _____	Max: _____
pH (Post Coag)	Typical: _____	Min: _____	Max: _____

2. Is jar testing routinely performed? Yes \_\_\_\_\_ No \_\_\_\_\_

3. Primary Coagulant \_\_\_\_\_

Please list actual coagulant type (aluminum sulfate, ferric chloride, polyaluminum chloride/PAC etc.), and chemical concentration if known (e.g. 48.5% aluminum sulfate, 8% Al<sub>2</sub>O<sub>3</sub>). If coagulant is a pre-hydrolyzed product (e.g. PAC), please list basicity of the product.

Chemical Concentration<sup>1</sup> \_\_\_\_\_ % Weight/SG<sup>2</sup> \_\_\_\_\_ Basicity (PAC/PAS) \_\_\_\_\_ %

Because WTP's can calculate their dosage various ways, we ask that you provide both the feed rate in ml/min as well as the ppm or mg/l dosage. This allows us to work out how dosage is being calculated (e.g. as liquid product, as dry aluminum sulfate, as aluminum oxide, or as aluminum). This is very important to establishing the proper instruments settings on the LabSense for automatic titration and dosage determination purposes.

Coagulant Feed Rate (e.g. ml/min)	Typical: _____	Min: _____	Max: _____
Coagulant Dosage (ppm or mg/l)	Typical: _____	Min: _____	Max: _____

4. **Secondary Coagulant** \_\_\_\_\_

A secondary coagulant is defined as any inorganic or organic product that is fed along with the primary coagulant that aids in charge neutralization (e.g. a low molecular weight polymer like DADMAC). Please list actual coagulant type (aluminum sulfate, ferric chloride, polyaluminum chloride/PAC etc.), and chemical concentration if known (e.g. 48.5% aluminum sulfate, 8% Al<sub>2</sub>O<sub>3</sub>). If coagulant is a pre-hydrolyzed product (e.g. PAC), please list basicity of the product.

Chemical Concentration<sup>1</sup> \_\_\_\_\_ % Weight/SG<sup>2</sup> \_\_\_\_\_ Basicity (PAC/PAS) \_\_\_\_\_ %

Coagulant Feed Rate (e.g. ml/min) Typical: \_\_\_\_\_ Min: \_\_\_\_\_ Max: \_\_\_\_\_

Coagulant Dosage (ppm or mg/l) Typical: \_\_\_\_\_ Min: \_\_\_\_\_ Max: \_\_\_\_\_

5. **Flocculant** \_\_\_\_\_

Flocculant is a high molecular weight polymer that is fed to bridge coagulated particles into larger floc agglomerations. Please list actual polymer type and polymer concentration.

Anionic/Cationic Concentration<sup>1</sup> \_\_\_\_\_ %

Coagulant Feed Rate (e.g. ml/min) Typical: \_\_\_\_\_ Min: \_\_\_\_\_ Max: \_\_\_\_\_

Coagulant Dosage (ppm or mg/l) Typical: \_\_\_\_\_ Min: \_\_\_\_\_ Max: \_\_\_\_\_

<sup>1</sup> Provide the chemical concentration value that is used in the dosage calculation (e.g. 48% is commonly used for Alum when calculating as dry aluminum sulfate).

<sup>2</sup> Provide the weight or specific gravity of the chemical.

6. List all other chemicals (chlorine, caustic, potassium permanganate, filter aids etc.), that are fed upstream of filtration along with their typical dosage.

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**Drawing**

Please provide a simple plant diagram (hand sketch) that describes the process and shows points of chemical addition. Something like this:

