

## ParaFlow™ Solution Analysis Report

<b>Customer Name</b>	DuPont Experimental Stn	<b>Sample Drawn</b>	Aug 16,2017
<b>Unit Model No.</b>	YPCST22G46CXA	<b>Report Date</b>	Aug 22,2017
<b>Unit Serial No.</b>	GLCM157836 #1	<b>Report Number</b>	R18612
<b>Sample Received</b>	Aug 21,2017	<b>PO Number</b>	1-54557779063

Inhibitor Type: **Molybdate**

	<u>Sample Data</u>	<u>Allowable Range</u> (Based on 55% LiBr)	<u>Converted Data</u> (Sample data converted to 55%)
<b>Sample Concentration</b>	<b>52.79</b> % LiBr		<b>55.00</b> % LiBr
<b>Sample Specific Gravity</b>	<b>1.576</b> at 75°F		<b>1.620</b> at 75°F
<b>Lithium Molybdate Inhibitor</b>	<b>141</b> mg/l	<b>225-325</b>	<b>151</b> mg/l
<b>Alkalinity (Lithium Hydroxide)</b>	<b>0.202</b> N	<b>0.14-0.22</b>	<b>0.216</b> N
<b>Dissolved Copper</b>	<b>66</b> mg/l	<b>0-100</b>	<b>71</b> mg/l
<b>Ammonia</b>	<b>86</b> mg/l	<b>0-100</b>	<b>92</b> mg/l
<b>Lithium Nitrate</b>	<b>89</b> mg/l		<b>95</b> mg/l

### Corrections Necessary

<b>Lithium Molybdate Inhibitor</b>	Add .000108 lbs. of solid Li <sub>2</sub> MoO <sub>4</sub> per lb. of solution in the unit OR Add .000034 gals of 30% Li <sub>2</sub> MoO <sub>4</sub> solution per lb. of solution in the unit.
<b>Lithium Hydroxide</b>	No
<b>Copper Removal</b>	No
<b>Ammonia Removal</b>	No

Data included in this report are the result of only one solution sample. If there is a drastic change in any parameter as compared with the last sample result, prior to adding chemicals or performing Copper or Ammonia Removal, it may be advisable to resample. The best method of preventing problems due to improper solution chemistry is by taking regular samples and trending the sample data. Maintaining proper Solution Chemistry is critical to the life of your ParaFlow Unit. **York Factory Service** is factory trained and authorized to perform the necessary chemical additions and adjustments required to keep your unit operable and reliable.

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<b>Customer Name</b>	DuPont Experimental Stn	<b>Sample Drawn</b>	Aug 16,2017
<b>Unit Model No.</b>	YPCST22G46CXA	<b>Report Date</b>	Aug 22,2017
<b>Unit Serial No.</b>	GBDM248980 #2	<b>Report Number</b>	R18245
<b>Sample Received</b>	Aug 21,2017	<b>PO Number</b>	1-54557779063

**Inhibitor Type:** Molybdate

	<u>Sample Data</u>	<u>Allowable Range</u> <small>(Based on 55% LiBr)</small>	<u>Converted Data</u> <small>(Sample data converted to 55%)</small>
<b>Sample Concentration</b>	53.32 % LiBr		55.00 % LiBr
<b>Sample Specific Gravity</b>	1.586 at 75°F		1.620 at 75°F
<b>Lithium Molybdate Inhibitor</b>	104 mg/l	225-325	110 mg/l
<b>Alkalinity (Lithium Hydroxide)</b>	0.167 N	0.14-0.22	0.176 N
<b>Dissolved Copper</b>	76 mg/l	0-100	80 mg/l
<b>Ammonia</b>	55 mg/l	0-100	58 mg/l
<b>Lithium Nitrate</b>	72 mg/l		76 mg/l

### Corrections Necessary

<b>Lithium Molybdate Inhibitor</b>	Add .000134 lbs. of solid Li <sub>2</sub> MoO <sub>4</sub> per lb. of solution in the unit OR Add .000041 gals of 30% Li <sub>2</sub> MoO <sub>4</sub> solution per lb. of solution in the unit.
<b>Lithium Hydroxide</b>	No
<b>Copper Removal</b>	No
<b>Ammonia Removal</b>	No

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<b>Unit Model No.</b>	YPC22G46CXA	<b>Report Date</b>	Aug 22,2017
<b>Unit Serial No.</b>	GADM233620 #3	<b>Report Number</b>	R18809
<b>Sample Received</b>	Aug 21,2017	<b>PO Number</b>	1-54557585071

**Inhibitor Type:** **Molybdate**

	<u>Sample Data</u>	<u>Allowable Range</u> (Based on 55% LiBr)	<u>Converted Data</u> (Sample data converted to 55%)
<b>Sample Concentration</b>	<b>49.12</b> % LiBr		<b>55.00</b> % LiBr
<b>Sample Specific Gravity</b>	<b>1.514</b> at 75°F		<b>1.620</b> at 75°F
<b>Lithium Molybdate Inhibitor</b>	<b>358</b> mg/l	<b>225-325</b>	<b>429</b> mg/l
<b>Alkalinity (Lithium Hydroxide)</b>	<b>0.143</b> N	<b>0.14-0.22</b>	<b>0.171</b> N
<b>Dissolved Copper</b>	<b>49</b> mg/l	<b>0-100</b>	<b>59</b> mg/l
<b>Ammonia</b>	<b>144</b> mg/l	<b>0-100</b>	<b>173</b> mg/l
<b>Lithium Nitrate</b>	<b>125</b> mg/l		<b>150</b> mg/l

### Corrections Necessary

<b>Lithium Molybdate Inhibitor</b>	No	
<b>Lithium Hydroxide</b>	No	
<b>Copper Removal</b>	No	
<b>Ammonia Removal</b>	<b>Yes</b>	<b>Consult York Factory Service</b>

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<b>Unit Model No.</b>	YPCST22G46CXA	<b>Report Date</b>	Aug 22,2017
<b>Unit Serial No.</b>	GNCM94230017 #4	<b>Report Number</b>	R17361
<b>Sample Received</b>	Aug 21,2017	<b>PO Number</b>	1-54557585071

Inhibitor Type: **Molybdate**

	<u>Sample Data</u>	<u>Allowable Range</u> (Based on 55% LiBr)	<u>Converted Data</u> (Sample data converted to 55%)
<b>Sample Concentration</b>	<b>51.10</b> % LiBr		<b>55.00</b> % LiBr
<b>Sample Specific Gravity</b>	<b>1.547</b> at 75°F		<b>1.620</b> at 75°F
<b>Lithium Molybdate Inhibitor</b>	<b>179</b> mg/l	<b>225-325</b>	<b>202</b> mg/l
<b>Alkalinity (Lithium Hydroxide)</b>	<b>0.143</b> N	<b>0.14-0.22</b>	<b>0.161</b> N
<b>Dissolved Copper</b>	<b>22</b> mg/l	<b>0-100</b>	<b>25</b> mg/l
<b>Ammonia</b>	<b>56</b> mg/l	<b>0-100</b>	<b>63</b> mg/l
<b>Lithium Nitrate</b>	<b>95</b> mg/l		<b>107</b> mg/l

### Corrections Necessary

<b>Lithium Molybdate Inhibitor</b>	Add .000076 lbs. of solid Li <sub>2</sub> MoO <sub>4</sub> per lb. of solution in the unit OR Add .000024 gals of 30% Li <sub>2</sub> MoO <sub>4</sub> solution per lb. of solution in the unit.
<b>Lithium Hydroxide</b>	No
<b>Copper Removal</b>	No
<b>Ammonia Removal</b>	No

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