

FOR DU PONT USE ONLY

DATE March 18, 1976

TEST AUTHORIZATION NO. TA-C- 76-309 & TEST CONCLUSION

OFFICIAL PRODUCT NAME 2-t-Amylanthraquinone
 PRODUCT CODE NO. 050 816 2000 POUNDS PRODUCT PROPOSED -
 AREA "Ponsol" BUILDING NAME Intermediates
 TITLE Determination of oleum concentration by specific gravity.
 PREPARED BY: J. N. Leech RESPONSIBLE FOR TEST AND TEST CONCLUSION: J. N. Leech

PURPOSE OF TEST: To determine oleum concentration by specific gravity. This determination can be done by the operator at the reaction vessel. Currently the acid mix is analyzed at G.A.L. Sample required for testing is too large to send through the sample tube; much quicker to do tubside analysis.

DURATION OF TEST: Future production.

STANDARD INVOLVED: TMR-C-71-61, no CWP written.

ANALYTICAL CONTROL OR SPECIFICATIONS: ☐ No change ☒ Change described under Test Details
 PROCESS HAZARDS REVIEW: ☐ Required before test ☒ Not required
 MATERIAL SAFETY DATA SHEET: ☐ Revision required ☒ No change
 PACKAGING AND SHIPPING CLASSIFICATIONS: ☐ Revision required ☒ No change
 TECHNICAL BASIS FOR CHANGE: Plant experience in conjunction with TA-C-75-1016, dated October 24, 1975.

TEST DETAILS:
 (Include Safety and Waste Disposal) See attachment.

Results of Test: Specific gravity determination for % SO₃ is accurate and rapid.

Recommendation: Adopt the specific gravity method for determining oleum concentration.

DISTRIBUTION:

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APPROVED BY:

Robert S. Lake 3/24/76 R. B. Root 3/24/76
 SR. SUPVR., MANUFACTURING DATE SUPT./CH. SUPVR., TECH./PLT. ASSIST. DATE

CHIEF SUPVR., MANUFACTURING DATE

AUTHORIZED BY:

M. E. Reinhardt 3/25/76
 SUPT., MANUFACTURING DATE

NOT REQUIRED.
 QUALITY CONTROL OR ANALYTICAL* DATE

NOT REQUIRED.
 GEN. SUPT., MANUFACTURING* DATE

NOT REQUIRED.

MANUFACTURING MANAGER* DATE

NOT REQUIRED.

TECHNICAL DIVISION* DATE

NOT REQUIRED.

PLANT MANAGER* DATE

*MARK "NOT REQUIRED" WHERE APPLICABLE
 MU-1752 (Rev. 5/75)

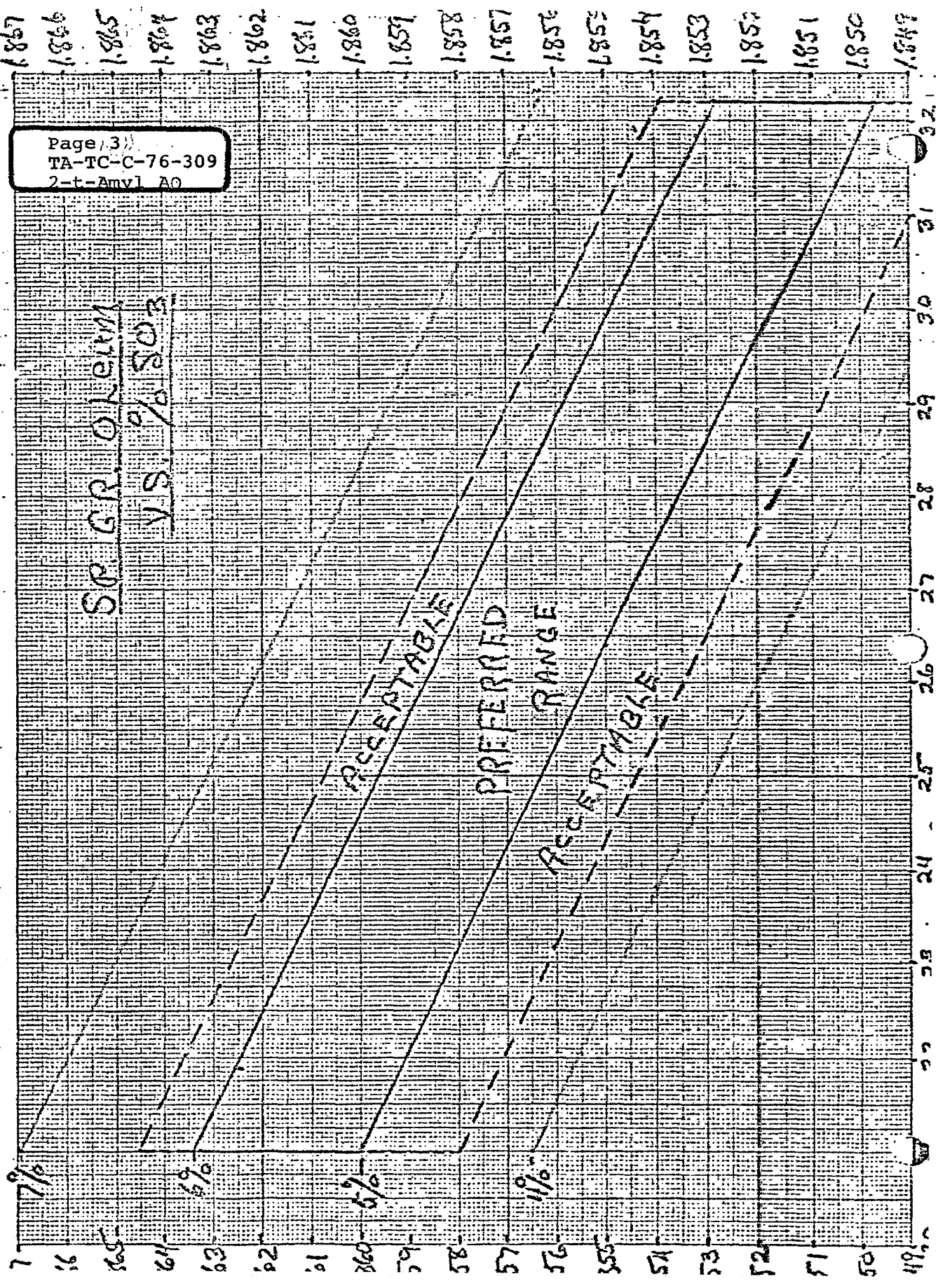
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Page 2
TA-C- and TC-C-76-309
2-t-Amylanthraquinone

Test Details:

Determination of Oleum Concentration (% SO₃)

1. Place 230 cc. of the oleum to be measured into a dry 250 cc. graduate.
2. Measure the temperature of the oleum using a JL-2 or JL-3 thermometer.
3. Measure the specific gravity to 0.001 of a unit using a dry hydrometer having a range 1.800 - 2.000.
4. From the graph of Specific Gravity of Oleum vs. temperature determine if the % SO₃ is in the preferred or acceptable range.
5. To adjust if necessary, calculate the difference between the measured specific gravity and a specific gravity in the preferred range at the measured temperature.
6. Using the "Adjustment" chart, add 20% oleum to increase the % SO₃ and 98% sulfuric acid to decrease the % SO₃.



Page 3
TA-TC-C-76-309
2-t-Amyl AO

Page 4
TA-C- and TC-C-76-309
2-t-Amylanthraquinone

OLEUM ADJUSTMENT

Difference Between Sp.Gr. Measured and Preferred at the Same Temperature	Pounds of 20% Oleum to Add to Increased Oleum %	Pounds of 98% Sulfuric Acid to Add to Decrease Oleum %	
		<u>Summer</u>	<u>Winter*</u>
0.001	150	150	75
0.002	300	300	150
0.003	450	450	225
0.004	600	600	300
0.005	750	750	375
0.006	900	900	450
0.007	1050	1050	525
0.008	1200	1200	600

*Winter acid figures are an estimate and will require
plant experience to establish accurate figures.

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