ticizers in polyvinyl chloride resins. Performance characteristics as primary and secondary plasticizers in polyvinyl sheeting and extruded tapes were determined on esters from methyl to heptadecyl tallate.

Results indicate that these materials impart low-temp properties which would make them of value as low-cost plasticizers in extruded and molded products where light and heat stability are not primary factors.

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SYNTHESIS AND EVALUATION OF TALL OIL FATTY ACID: FORMALDEHYDE DERIVED PLASTICIZERS

E. P. DiBella, R. Green, W. M. Kraft and R. T. Gottesman

Tall oil fatty acid was condensed with paraformaldehyde in the presence of acidic catalysts. Crude products containing free hydroxyl groups as well as polymeric material (due to the presence of interest linkages) were obtained. A product from "aromatized" tall oil fatty acid and formaldehyde was also prepared.

Plasticizer evaluations on the methyl esters of such formaldehyde condensates from oleic acid, linoleic acid, and tall oil fatty acid demonstrated that the major components of tall oil fatty acid were suitable as raw materials for plasticizer candidates. It was further shown that plasticizer performance was improved by acetylation of free hydroxyl groups. Since methyl esters proved too volatile as plasticizers in vinyl chloride sheet formulations, some ethyl, propyl and tetrahydrofurfuryl esters (in which the hydroxyl contents were lowered by acetylation) were also prepared. The esters were evaluated as plasticizers for a vinyl chloride polymer, Geon 101EP. Comparison was made to dioctyl phthalate and, where applicable to Monsanto S409 (as a typical polymeric system).

The following properties were measured: compatibility, tensile strength, 100% modulus, per cent elongation, hardness, brittle point, carbon volatility, extraction with hexane, oil and soapy water, light and heat stability. In general, the esters studied showed promise of utility as primary plasticizers for vinyl chloride polymers. They conferred a good overall balance of properties but exhibited somewhat poor heat stability and borderline compatibility.

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METAL SALTS OF TALL OIL FATTY ACIDS

S. E. Hanan and A. Fischer

The metal salts of tall oil fatty acids were introduced as paint driers during World War II. Paint industry experience reveals that oxidation-polymerization catalysts based on this readily available raw material are lower in cost, and generally equivalent in performance to naphthenates and octoates. However, the presence of rosin acids has limited the use of tall oil driers in many Federal specification applications. Manufacturing procedures, physical properties, and application of these driers in typical paint systems is reviewed.

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RECENT DEVELOPMENTS AND IMPROVEMENTS IN PRESSURE LEAF FILTERS

H. N. Haberstroh

Pressure leaf filters offer an economical solution to separation of solid and liquid phases in the processing of a wide range of chemicals including fats and oils. Recent developments and improvements, including automation, of pressure leaf filters are described.

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REPORT ON FALL MEETING OF FLAMMABLE SOLVENTS COMMITTEE OF THE NFPA

N. H. Moore

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SAFETY DEMONSTRATION

Engineer from Humble Oil & Refining Co.

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SAFETY FACTORS IN DESOLVENTIZING OF SOLVENT MEALS

Kenneth Becker

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USE OF INTRINSICALLY SAFE LOW VOLTAGE CONTROLS IN HAZARDOUS AREAS

Exhibit and Discussion by Engineering Dept., Cutler-Hammer Co.

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PRECISION AND ACCURACY—GAS LIQUID CHROMATOGRAPHIC ANALYSIS OF C_{14}-C_{18} FATTY ACID METHYL ESTERS

W. A. Pons, Jr. and V. L. Frampton

Repetitive analyses of four primary standards by GLC utilizing polyester columns and thermal conductivity detection yielded standard deviations ranging from ±0.3–0.5% corresponding to coefficients of variation of 1.0–2.0%. These data, representing an error of measurement of 1.5–3.0% at a 99% confidence level suggest a precision approaching that of conventional spectrophotometric measurements.

Proportionality factors, calculated from known mass or M concn divided by area per cent from GLC analysis, were found to be reproducible correction factors which may be generally applicable to GLC analysis of fatty acid methyl esters with polyester columns and thermal conductivity detectors.

Mass response to a thermal conductivity detector was found to decrease with either increasing mol wt for saturated C_{14}–C_{18} acids or with unsaturation among the C_{18} unsaturated acids, while M response increases with mol wt and decreases with degree of unsaturation.

The use of uncorrected area per cent data can introduce significant absolute mass errors ranging from about +11% for myristic acid to −17% for linolenic acid.

Room Assignments for Committee Meetings During Spring Meeting

Because of the fine response of the chairmen of the Administrative and Technical Committees, many of the committee sessions to be held during the Spring Meeting in New Orleans already have been scheduled. The date, time, and meeting rooms assigned for the committee sessions scheduled, as the Journal goes to press, are indicated in the tabulation below. Times indicated by "X" are times the respective rooms are not available; those indicated by blank spaces are still available for assignment for committee meetings. Chairmen who wish to schedule meetings of their committees during these periods are urged to contact General Chairman R. T. O'Connor, or Chairman W. A. Pons, Jr., Hotel Arrangements Committee, as promptly as possible.

AOCS Committee Room Assignments
Spring Meeting—New Orleans
April 19–22, 1964

Sunday, April 19, 1964	Red Oak Room	Orleans Room	Southern Pine Room	Wildcatter Room
10:00–12:00 noon	X		X	X
1:00– 2:00 p.m.	Governing Board	X	X	X
2:00– 3:00 p.m.	Governing Board	X	Tall oil sub-comm. on membership	
3:00– 4:00 p.m.	Governing Board	X	Tall oil sub-comm. on membership	
4:00– 5:00 p.m.	Governing Board	X	X	X
5:00– 6:00 p.m.	Governing Board	X	X	X

Monday, April 20, 1964	Orleans Room	Southern Pine Room	Baronne Room
8:00– 9:00 a.m.	X	X	X
9:00–10:00 a.m.			Fatty nitrogen sub-comm.
10:00–11:00 a.m.			Polymerized acid
11:00–12:00 noon			Epoxidized oils sub-comm.
1:00– 2:00 p.m.		Antioxidants sub-comm.	sub-comm.
2:00– 3:00 p.m.	Spectroscopy sub-comm.	Antioxidants sub-comm.	
3:00– 4:00 p.m.	Spectroscopy sub-comm.	Comm. fats and oils analysis	
4:00– 5:00 p.m.	Education	Comm. fats and oils analysis	
5:00– 6:00 p.m.		Bleaching sub-comm.	

Tuesday, April 21, 1964	Red Oak Room	Rex Room	Southern Pine Room	Baronne Room
8:00– 9:00 a.m.	X	X	Journal Committee	
9:00–10:00 a.m.	Standards	Industrial Oils and Derivatives	Journal Committee	
10:00–11:00 a.m.	Standards	Industrial Oils and Derivatives	Journal Advertising Comm.	
11:00–12:00 noon			Journal Advertising Comm.	
1:00– 2:00 p.m.	X	Local Section Liaison	Uniform Methods	X
2:00– 3:00 p.m.	X	Local Section Liaison	Uniform Methods	X
3:00– 4:00 p.m.	X		Uniform Methods	X
4:00– 5:00 p.m.	X		Uniform Methods	X
5:00– 6:00 p.m.	X		Uniform Methods	X

Wednesday, April 22, 1964	Red Oak Room	Rex Room	Southern Pine Room
9:00–10:00 a.m.	Instrumental Techniques		Water Soluble Protein
10:00–11:00 a.m.	Instrumental Techniques		Water Soluble Protein
11:00–12:00 noon			
1:00– 2:00 p.m.			
2:00– 3:00 p.m.	Governing Board		
3:00– 4:00 p.m.	Governing Board		
4:00– 5:00 p.m.	Governing Board		
5:00– 6:00 p.m.	Governing Board		

X—Room not available.