

Figure 1A

Purification of Crude Gum Rosin via Resin Acid/Salt Formation

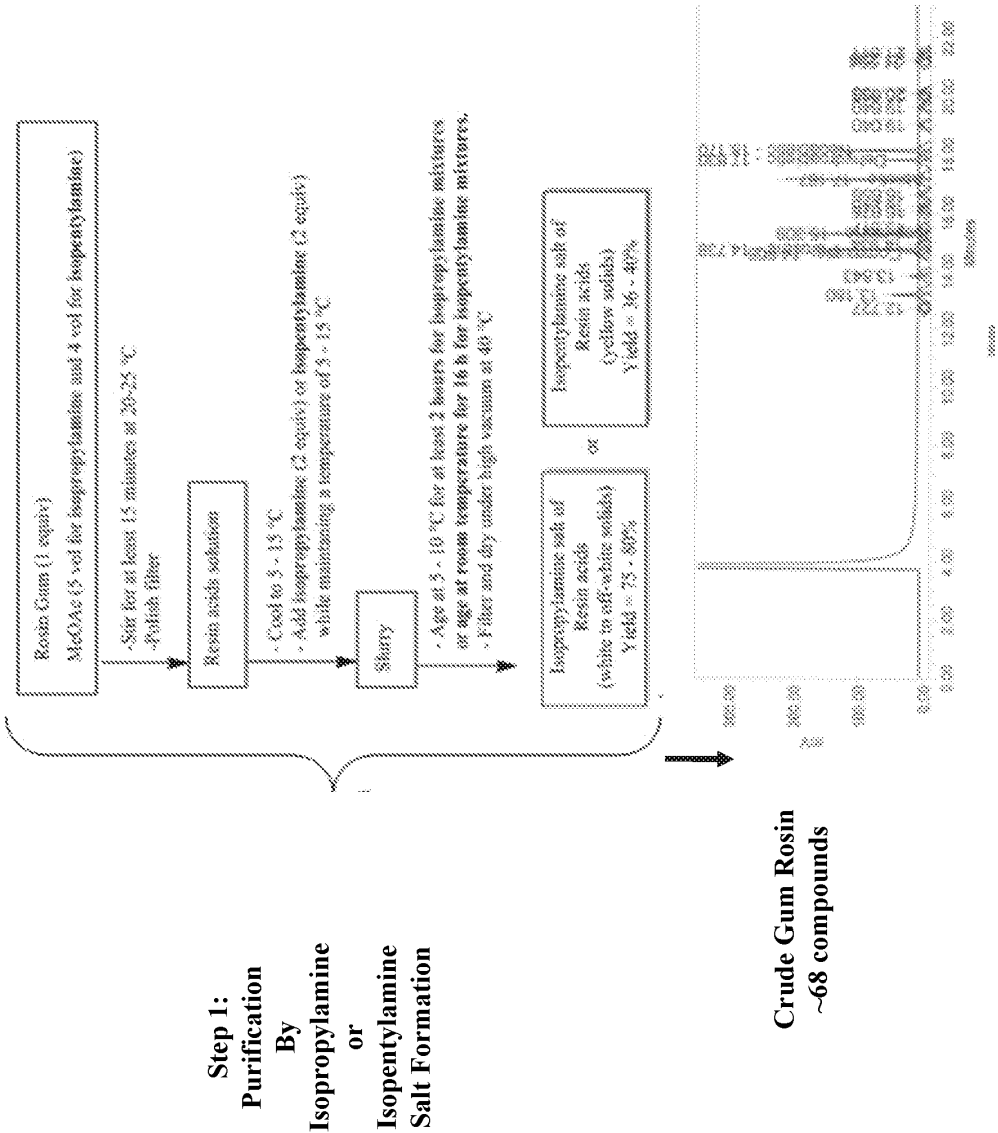


Figure 1B

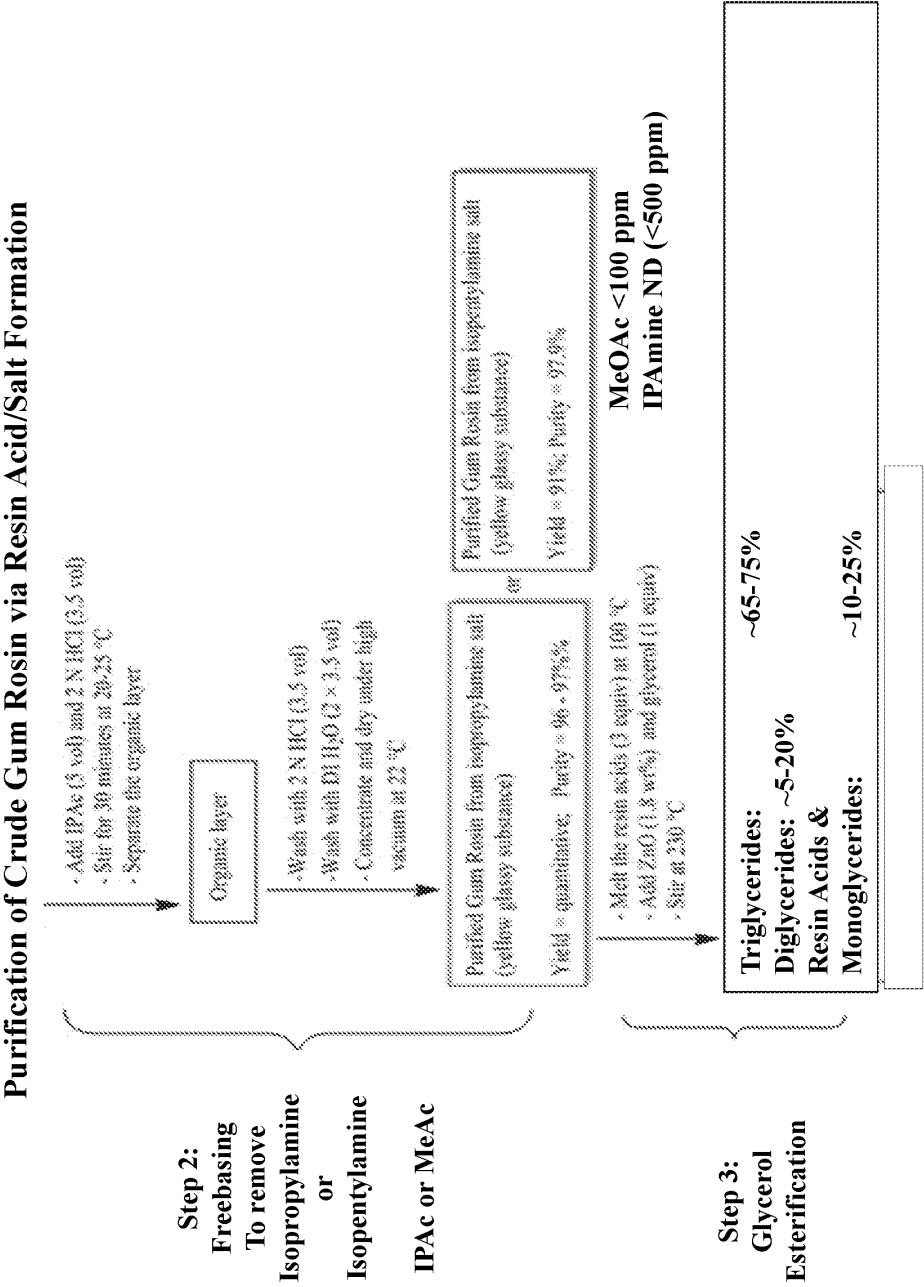


Figure 2

GC/MS Spectrum of Crude vs Purified Gum Rosin

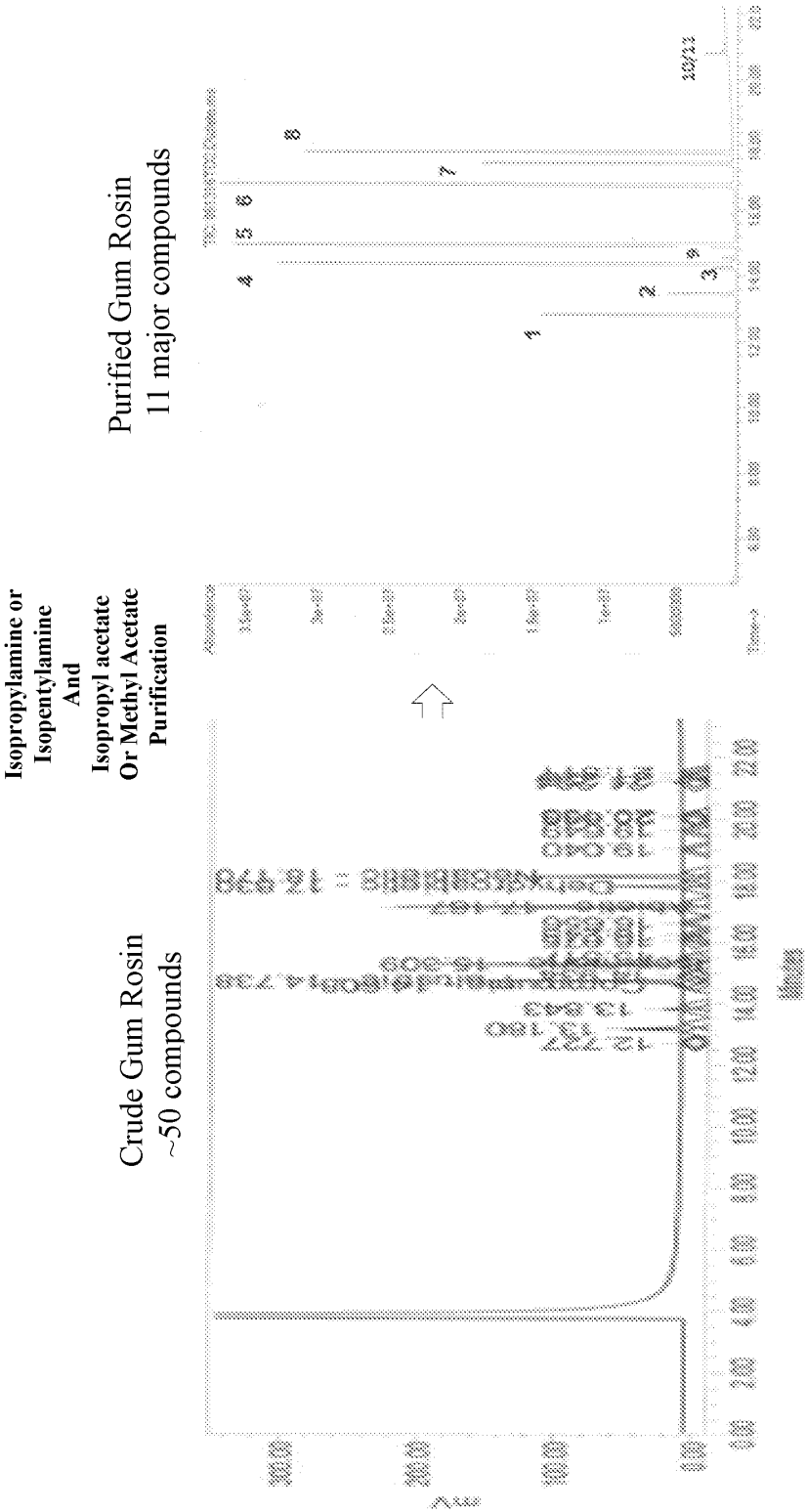
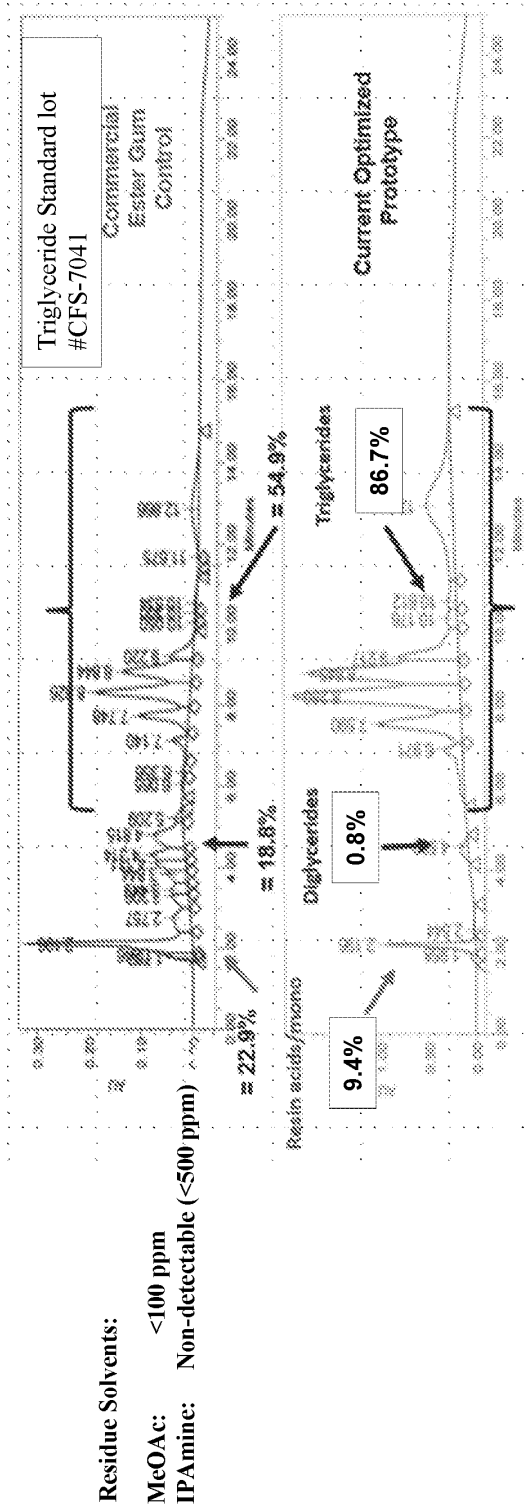


Figure 3

HPLC Chromatogram of Glycerol Esterified Resin Acids –
Ester Gum Control vs Current Optimized Glycerol Esterified Resin Acids Prototype

	Area % (HPLC)			
	Resin Acides & Monoglycerides	Diglycerides	Triglycerides	
Commercial Ester Gum Control Lot-CFS-7041	22.9	18.8	54.9	
Current Optimized Glycerol Esterified Resin Acids Prototype	9.4	0.8	86.7	



Composition of Glycerol Ester of Purified Gum Rosin (additional HT physical purification)

Sample Name	Resin Acids Purity% after Physical Purification	Additional Chemical Purification	Glycerol Ester of Purified Gum Rosin		
			Resin Acids & Monoglycerides	Diglycerides	Triglycerides
Ester Gum Control Lot-CFS-7041	N/A	N/A	22.9	18.8	54.9
17AK0423D	94.81%	96.8%	20.96	9.69	69.6%
17AK0441C	94.42%	N/A	19.0	12.73	68.3%
17AK0452B	94.71%	N/A	14.57	13.59	71.6%

