



SDI Review Form 1.6

Journal Name:	Asian Journal of Chemical Sciences
Manuscript Number:	Ms_AJOCS_41480
Title of the Manuscript:	Synthesis and Characterization of Pentaerythritol Diacrylate
Type of the Article	Original Research Article

General guideline for Peer Review process:

This journal's peer review policy states that **NO** manuscript should be rejected only on the basis of '**lack of Novelty**', provided the manuscript is scientifically robust and technically sound. To know the complete guideline for Peer Review process, reviewers are requested to visit this link:

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PART 1: Review Comments

	Reviewer's comment	Author's comment (if agreed with reviewer, correct the manuscript and highlight that part in the manuscript. It is mandatory that authors should write his/her feedback here)
Compulsory REVISION comments	<p>This paper reports details in terms of reaction temperatures and times for the most efficient preparation of pentaerythritol diacrylate from pentaerythritol and acrylic acid using p-toluenesulfonic acid (PTSA) deposited on silica gel as the catalyst in the presence of an inhibitor system. The compound is well known, being available from 5 commercial sources according to Scifinder. It has also been characterized many times. The only novel feature is the catalyst, PTSA deposited on silica gel, and perhaps the precise reaction conditions, although ref 3 (in Chinese) contains very similar conditions according to the summary on Scifinder. There is considerable interest in this compound so I reluctantly conclude that the paper should be</p> <p>Accepted after the extensive revisions suggested below. These are mainly in English although much more extensive referencing should be given as noted below.</p>	



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<p>Minor REVISION comments</p>	<p>changes</p> <p>Abstract line 7 supported on silica Line 8 Fourier transform infrared spectroscopy (FT-IR), and carbon nuclear magnetic resonance spectroscopy L 10 chromatography. L 13 sharply with increase in w_{cat}, until w_{cat} is 2.0 wt%, and then increases gently. The highest yield is obtained when the operating conditions are</p> <p>Introduction line 19 intermediate Line 24 groups, PEDA Line 29 (AA) catalyzed by p-toluenesulfonic acid (PTSA). Need ref 3 here and should also add the following ref: Li Sun, Sheng Cao, Weilan Xue, Zuoxiang Zeng & Wanyu Zhu, Journal of Adhesion Science and Technology, 2016, 30:11, 1212-1222, by the same group as submitted this paper. This paper contains the 1H NMR spectrum of the title compound. Perhaps both references should also be inserted after the next sentence that states that it is difficult to remove PTSA. Lines 39-40 infrared spectroscopy (FT-IR), and ^{13}C nuclear magnetic resonance spectroscopy (C-NMR). Lines 110 and following. The model of the NMR spectrometer and operating conditions should be specified (what was the solvent, what were the delay times, did the conditions remove the possibility of differential NOE effects, what were the chemical shifts referenced to?) since the authors state something about product structure (line 118) from relative signal intensities, sometimes a risky procedure. The spectrum in Figure 2 is very suspicious to this author- there is no noise, there are no solvent signals, there is no reference signal – it looks like a simulated spectrum, not a real spectrum. A reference to previous assignments of signals should be given eg R. A. Newmark and J. Palazotto, Applied Spectroscopy, 1990, 44, 804-807. Reaction conditions The authors must have the concentrations of the other components, the monoacrylate, the triacrylate and perhaps the tetraacrylate since they are following the reaction by HPLC. It would be interesting and perhaps instructive to see these graphed as well.</p>	
<p>Optional/General comments</p>		

Reviewer Details:

Name:	T. B. Grindley
Department, University & Country	Department of Chemistry, Dalhousie University, Canada