Reviewer F:  
  
Does the manuscript contain enough significant original material?:   
        yes  
  
Is the manuscript clearly and concisely written?:   
        yes  
  
Are the conclusions adequately supported by the data?:   
        yes  
  
Does the manuscript give appropriate credit to related recent publications?:  
  
        yes  
  
Are the references appropriate and free of important omissions?:   
        yes  
  
Is the length of the manuscript appropriate?:   
        yes  
  
Does the manuscript need condensation or extension?:   
        yes  
  
Is the quality of the figures (including legends and axes labelling)  
satisfactory?:   
        yes  
  
Are the nomenclature and units in accordance with SI?:   
        yes  
  
Are the English grammar and syntax satisfactory?:   
        yes  
  
ADDITIONAL COMMENTS  
Please indicate the page numbers for suggested corrections.  
Please, be as specific as possible if major correction by the author(s) is  
recommended! :   
        Title: Comparison of mixing performances of T, Y and arrow-shaped  
micromixers using 1 Villermaux-Dushman protocol at low Reynolds number  
  
This is extensive research, with a lot of analysis.  
The paper is well written and the topic is appropriate for the journal.  
  
The aim of the paper is well described and the discussion was well  
approached, its results and discussion are correlated to the cited  
literature data. The novelty of the work is clearly demonstrated.   
  
The significance of the Work: Given a large number of analyzed data, this is  
an interesting study with a significant impact in this area.   
  
Statistical interpretation of the analytical data should be more properly  
presented.  
  
Other Specific Comments: The work is properly presented in terms of the  
language. The work presented here is very interesting and well done, it is  
presented in a compact manner.   
  
Some specific comments are written within the attached document.  
  
REPORT:   
        I found the paper appropriate for publication in the Journal of Serbian  
Chemical Society, but only after some minor modifications and clarification  
from the Authors.  
  
In my opinion, this manuscript should:   
        be published after minor revision without additional review  
  
If manuscript is suitable for publishing, referees recommendation :   
        Original scientific paper  
  
------------------------------------------------------  
  
------------------------------------------------------  
Reviewer G:  
  
Does the manuscript contain enough significant original material?:   
        yes  
  
Is the manuscript clearly and concisely written?:   
        yes  
  
Are the conclusions adequately supported by the data?:   
        yes  
  
Does the manuscript give appropriate credit to related recent publications?:  
  
        yes  
  
Are the references appropriate and free of important omissions?:   
        yes  
  
Is the length of the manuscript appropriate?:   
        yes  
  
Does the manuscript need condensation or extension?:   
        yes  
  
Is the quality of the figures (including legends and axes labelling)  
satisfactory?:   
        yes  
  
Are the nomenclature and units in accordance with SI?:   
        yes  
  
Are the English grammar and syntax satisfactory?:   
        yes  
  
ADDITIONAL COMMENTS  
Please indicate the page numbers for suggested corrections.  
Please, be as specific as possible if major correction by the author(s) is  
recommended! :   
        -  
  
REPORT:   
        Review of the manuscript 8018-43970-2-RV:   
  
Comparison of mixing performances of T, Y and arrow-shaped micromixers using  
Villermaux-Dushman protocol at low Reynolds number  
  
In the manuscript, mixing performances of T, Y and arrow-shaped micromixers  
have been investigated. A Villermaux-Dushman protocol at low Reynolds  
numbers has been used for determination of mixing.  
The manuscript is well written and organized. The choice of literature is  
adequate. The aim of the study was to compare the mixing performance of  
three types of mixers at very low Re numbers using a VD test.    
The results of the investigation have a certain level of novelty and might  
be interesting for publishing but there are several comments and questions  
that should be addressed before the publication.   
  
1. The result of this study is that “The mixing performance test of  
Villermaux and Dushman is unreliable at Re < 26.5”. The question is why  
some additional method hadn`t been used since this common VD test didn’t  
give results? The aim of the study was to compare mixing performance at low  
Re numbers.   
2. In materials and methods: line 192 model of UV spectrophotometer and its  
accuracy should be given.   
3. Experimental determination of mixing time should be explained in details.  
 line 204.  
4. Line 201: what is the accuracy of pressure sensors?  
5. In line 247 it is stated, “The observed noise at steady state (at Re <  
17.7) is quite high but too small to account for the observed  
inconsistency”. Please justify this claim.  
6. In fig. 3a) and b) there is no difference in mixing time between mixers  
up to Re number about 20 while for Re <20 there is no consistency in the  
results. This probably can be attributed to the experimental procedure and  
difficulties in measuring absorbance. I was wondering why some other  
reaction hadn`t been chosen? There are at least three types of reaction for  
measuring mixing.      
7. For predicting mixing time eqs. 5 and 6 were used. However, in these  
models geometry of mixers has not been taken into account so it cannot be  
expected that they will give any difference for distinctive geometries. This  
is also due to the influence of pressure drop which is practically the same  
for all mixers particularly at low Re numbers. It would be better to use  
some other model taking into account geometry otherwise only the simplest  
model is enough for testing at low Re numbers.        
  
In general, since VD method failed to prove suitable for mixing time  
determination at very low Re number and it would be interesting to have  
these data at low Re number to see if mixing is even possible, I would  
suggest using an additional method in order to clarify whether it is method  
related or fluid mechanics related.  
  
In my opinion, this manuscript should:   
        be published after major revision and additional review  
  
If manuscript is suitable for publishing, referees recommendation :   
        Original scientific paper