# Article information:

Turbulently flowing liquid–liquid dispersions. Part I: Drop breakage and coalescence - ScienceDirect  
<https://www.sciencedirect.com/science/article/pii/S1385894710011460>

# Article summary:

1. This article presents a successful attempt to simulate turbulently flowing liquid–liquid dispersions using the model developed by Coulaloglou and Tavlarides (1977).

2. Experimental data was used to validate the model predictions, with good agreement obtained at different flow velocities and diverse screen geometries.

3. The use of multi-stage screen-type static mixers allowed for the development of accurate model parameters that may be used for simulating other more complex liquid–liquid contacting conditions.

# Article rating:

May be slightly imbalanced: The article presents the information in a generally reliable way, but there are minor points of consideration that could be explored further or claims that are not fully backed by appropriate evidence. Some perspectives may also be omitted, and you are encouraged to use the research topics section to explore the topic further.

# Article analysis:

The article is generally reliable and trustworthy, as it provides detailed information on the simulation of turbulently flowing liquid–liquid dispersions, along with experimental data to validate the model predictions. The authors also provide a comprehensive list of nomenclature and Greek letters used in the article, which helps readers understand the concepts discussed in greater detail. Furthermore, they discuss potential applications of their findings in mechanically agitated tanks, providing insight into how their research can be applied in real-world scenarios.

However, there are some areas where the article could be improved upon. For example, while the authors provide an extensive list of nomenclature and Greek letters used in the article, they do not explain what each term or letter stands for or how it relates to their research. Additionally, while they discuss potential applications of their findings in mechanically agitated tanks, they do not provide any evidence or examples to support this claim. Finally, while they mention that minor changes in chemical composition can drastically affect performance, they do not explore any counterarguments or alternative solutions that could help mitigate this issue.

# Topics for further research:

* Mechanically agitated tanks
* Chemical composition effects on performance
* Turbulent liquid–liquid dispersions
* Greek letter nomenclature
* Model validation with experimental data
* Alternative solutions for minor changes in chemical composition

# Report location:

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