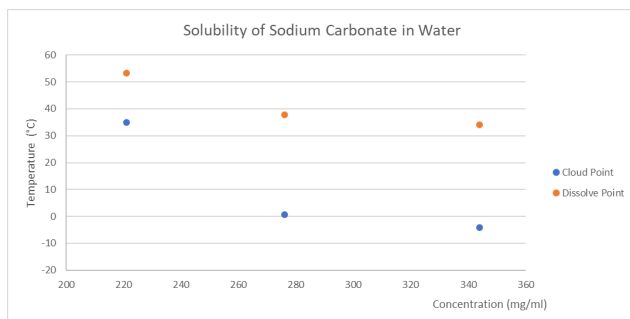




Automated Determination of MSZW (Meta Stable Zone Width)



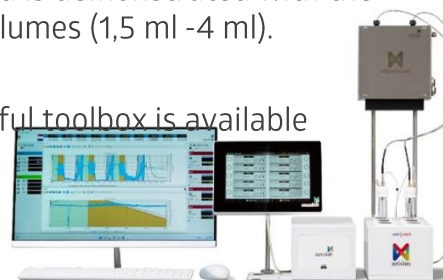
Keywords

Metastable Zone With (MSZW), Cloud Point, Dissolution Point, Dispensing Unit, automated Dilution, Sodium Carbonate

Summary

The automated overnight determination of MSZW, Cloud Point and Dissolution Point in different concentrations could be demonstrated with the system Sodium Carbonate in Water in low volumes (1,5 ml -4 ml).

With the XELSIUS eXperiment software very useful toolbox is available to analyze and save the results.





eXperiment

Equipment

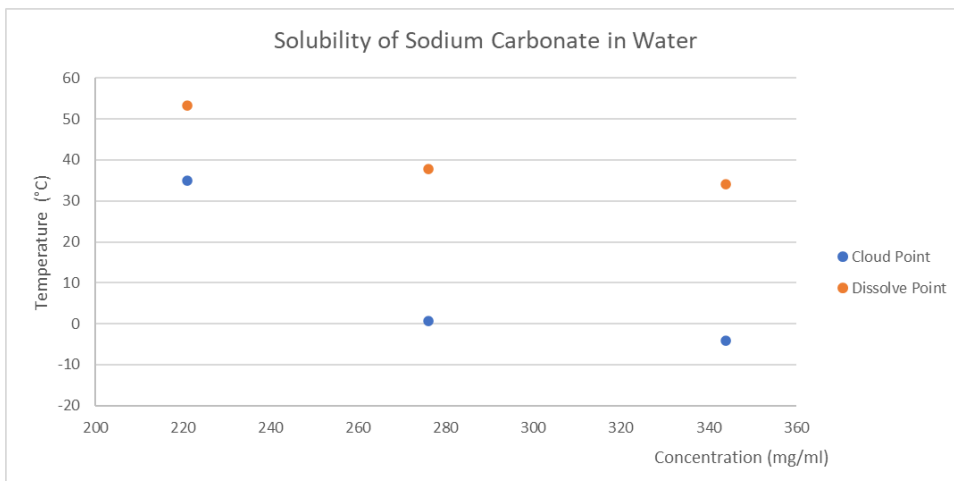
ITEM	DESCRIPTION
8053 000 100	xelsius Basic Unit
8053 000 213	xelsius Sensor Connect
	Turbidity Research Kit
	eXperiment Software
8053 000 210	xelsius Dispensing Unit

Temp	time	rpm	
80°C	10´	1.500	
	45´	1.500	90°/45`
-10°C	20´	1.500	
	45´	1.500	90°/45`
80°C	10`	1.500	Dose 1000 µ @ 50µl/min
Cycles	3		

Reaction Set Up

Substances	
620 mg	Sodium Carbonate in 1.8 ml Water
415 mg	Sodium Carbonate in 1.5 ml Water

Results



Concentration mg/ml	Cloud Point °C	Dissolution Point °C
344	34,6	53,2
276	0,7	37,9
221	- 4,2	34,1



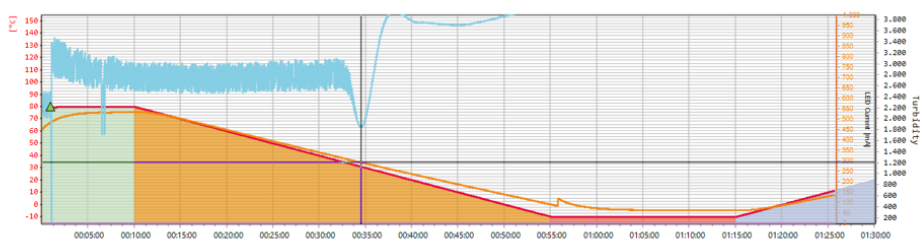
nevolab

Am Gehrenbach 8
D-88167
Maierhöfen
info@nevolab.de

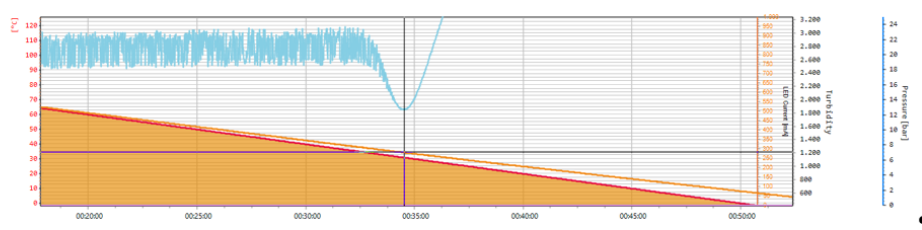


Run Time Diagramm

Cloud-Point-@:34:32-T=-34,6°C

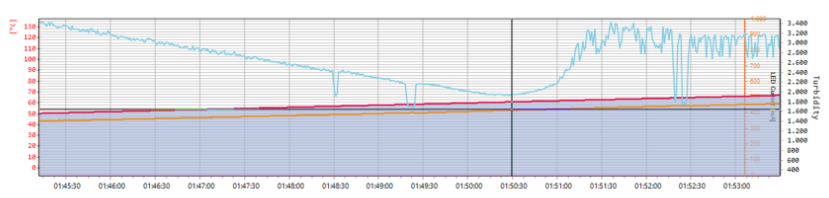


¶



Diss-Point-1-@:1:50:22-T=-54,2°C

¶



Notes

Lower concentration requires lower temperatures than -10°C

References

Data provided by: nevoLAB GmbH, 2022

All data without any liability and warranty, copyright of nevoLAB GmbH



About us

nevoLAB is an innovative manufacturing company with skills and passion devoted to provide advanced quality tools and solutions to the chemical community. We are located in Maierhofen in south Germany. Our R&D team has developed and released a series of new lab equipment and instruments dedicated to modern research laboratories.

The eXperiment System

Based on modern IoT technology the eXperiment system is an ideal supplement to the xelsius synthesis reactor to gain more benefit out of your valuable research.

Intuitive software tools offers recordability, reproducibility and shareability to your experiments at every stage of the discovery process, from early reaction setup to analyzing and sharing the outcome.

Working with small volumes and miniaturized sensors saves chemicals and energy and provides high quality experimental data.

Application Notes

Chemical laboratories perform many different procedures during studies and research experiments. Thanks to its flexibility and modularity, xelsius & xelsius eXperiment system can cover many tasks of researches needs in an efficient way.

To support you during your research studies and tasks we have created "Application Notes" as a simple and user-friendly collection of successful use cases to work with the xelsius components to inspire you to find your solution for your valuable work. Enjoy!

