

## Kiel Device Reaction Times

Lab	Carbonate Type	Reaction 1 Minutes	Reaction 2 Minutes
U. Michigan	benthics	6	2
Australia National U.	benthics	10	2
Kiel University	biogenic carbonate	2	2
WHOI	biogenic carbonate	10	1
Kiel University	bulk sediment	2	2
North Carolina State U.	bulk sediment	8	2
WHOI	bulk sediment	10	1
Syracuse U.	coral powder	1.5	1.5
WHOI	coral powder	10	1
Australia National U.	coral powder	10	2
North Carolina State U.	marble	8	2
Australia National U.	planktics	5	2
North Carolina State U.	planktics	6	2
U. Michigan	planktics	6	2
CNRS		7	2
Stanford		7	
Texas A & M		12	
U. Florida			

"biogenic carbonate" includes calcite and aragonite (planktics, benthics and coral)

Kiel University note: Reaction-1 time starts to be counted when the last acid drop was added. So, acid dropping time may add another one to several minutes to the total chemical reaction time depending on the number of acid drops chosen in the settings for the run. Kiel University normally uses 4 drops, i.e. about 1 'excess' minute for biogenic carbonates, and up to 30 drops, i.e. about 5 to 7 excess minutes for large bulk sediment samples.

**U. Michigan note: Dolomites reacted for 10+2 and siderite for 15+2.**

Any more difficult (like low carbonate) to react material is reacted longer.

Apatite is reacted for 10+2, but more drops are used (5 as opposed to 3).