

# Data of ternary aqueous solutions on sodium sulfate decahydrate substrates

## - simultaneous crystallization

$T / ^\circ C$	$w_{init,Na_2SO_4}$	$w_{end,Na_2SO_4}$	$w_{init,Na_2CO_3}$	$w_{end,Na_2CO_3}$	$k_{g,Na_2SO_4} / \frac{m}{s}$	$g_{Na_2SO_4} / -$	$k_{g,Na_2CO_3} / \frac{m}{s}$	$g_{Na_2CO_3} / -$
23.5	0.351	0.315	0.442	0.429	$0.2 \cdot 10^{-5}$	1	$0.8 \cdot 10^{-5}$	1
	0.351	0.315	0.442	0.441	$0.06 \cdot 10^{-5}$		$7.0 \cdot 10^{-5}$	
	0.340	0.309	0.451	0.451	$0.4 \cdot 10^{-5}$		$0.2 \cdot 10^{-5}$	
	0.340	0.311	0.451	0.465	$0.3 \cdot 10^{-5}$		$5.0 \cdot 10^{-5}$	
	0.347	0.316	0.458	0.413	$0.5 \cdot 10^{-5}$		$7.0 \cdot 10^{-5}$	
22	0.351	0.280	0.440	0.472	$0.06 \cdot 10^{-5}$	1	$1.0 \cdot 10^{-5}$	1
	0.351	0.274	0.442	0.472	$0.08 \cdot 10^{-5}$		$0.7 \cdot 10^{-5}$	
	0.356	0.277	0.440	0.469	$0.07 \cdot 10^{-5}$		$0.4 \cdot 10^{-5}$	
18.5	0.249	0.220	0.375	0.362	$0.1 \cdot 10^{-5}$	1	$7.0 \cdot 10^{-5}$	1
	0.258	0.242	0.311	0.291	$0.3 \cdot 10^{-5}$		$0.1 \cdot 10^{-5}$	1
	0.276	0.257	0.435	0.381	$1.0 \cdot 10^{-5}$		$1.4 \cdot 10^{-5}$	1.2
	0.273	0.233	0.435	0.379	$0.7 \cdot 10^{-5}$		$7.0 \cdot 10^{-5}$	1
17	0.249	0.202	0.389	0.390	$0.1 \cdot 10^{-5}$	1	$0.4 \cdot 10^{-5}$	1
	0.249	0.201	0.386	0.395	$0.08 \cdot 10^{-5}$		$0.6 \cdot 10^{-5}$	
	0.247	0.202	0.383	0.389	$0.08 \cdot 10^{-5}$		$0.4 \cdot 10^{-5}$	
	0.247	0.206	0.372	0.350	$0.2 \cdot 10^{-5}$		$1.0 \cdot 10^{-5}$	
	0.245	0.195	0.370	0.371	$0.04 \cdot 10^{-5}$		$1.0 \cdot 10^{-5}$	

Red marked values are not considered in average values, because mass transfer coefficients of sodium carbonate are greater than diffusion mass transfer coefficients.