

Electronic Supplementary Material of

Comparison of ionic, atomic and molecular emissions in underwater laser-induced breakdown spectroscopy for quantitative analysis of Ca and Sr

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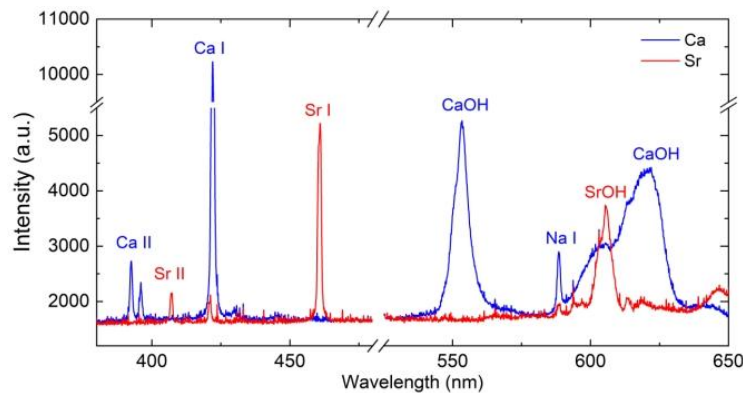


Figure S1. Underwater LIBS spectra obtained from water solutions containing only Ca and only Sr. The spectra were acquired at a delay of 200 ns with a gate width of 2 μ s. Each spectrum was an average of 100 laser shots.

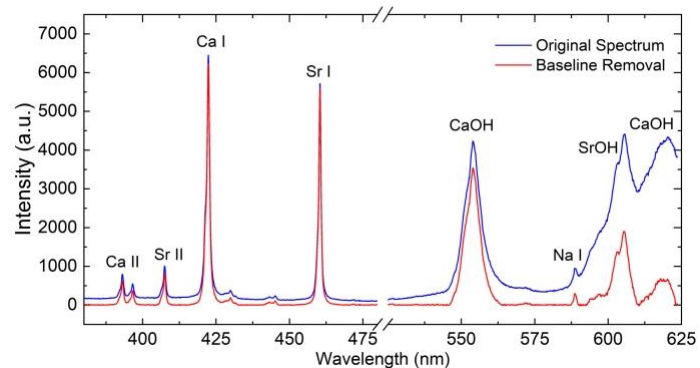


Figure S2. The raw underwater LIBS spectrum of Ca and Sr (blue) and the spectrum after baseline removal (red).

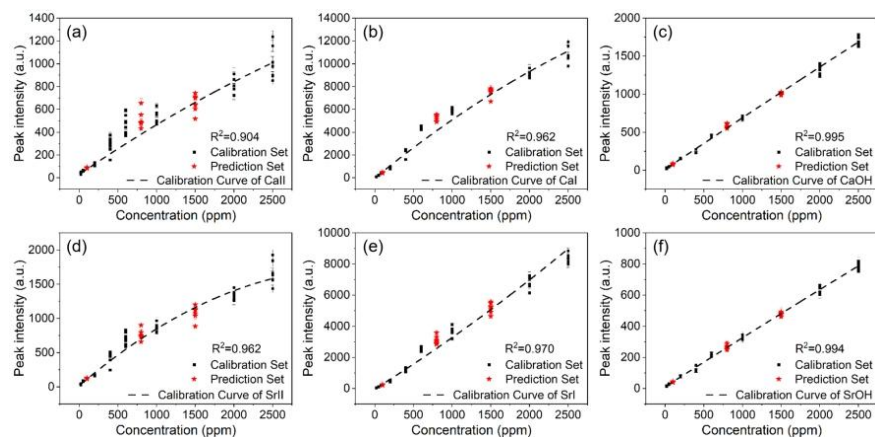


Figure S3. Calibration curves of (a) Ca II 393.4 nm, (b) Ca I 422.7 nm, (c) CaOH 554 nm, (d) Sr II 407.8 nm, (e) Sr I 460.7 nm, and (f) SrOH 605 nm obtained from the spectra of different ambient pressures from 0.1 to 50 MPa. The calibration curves were fitted with a quadratic regression. The spectra were acquired at a delay of 200 ns with a gate width of 100 ns.

Table S1. Relative emission contribution of OH 309 nm, Ca II 393.4 nm, Sr II 407.8 nm, Ca I 422.7 nm, Sr I 460.7 nm, CaOH 554 nm, and SrOH 605 nm at different delay time. Data in this table correspond to Figure 3 in the manuscript.

Species Delay Time (ns)	OH	Ca II	Sr II	Ca I	Sr I	CaOH	SrOH
20	46.3	23.3	14.6	15.7	/	/	/
50	34.1	17.6	9.9	12	5.6	20.8	/
70	29.2	14.2	7.9	12	4.6	17.1	14.9
100	28.2	12.1	7	13	4.9	17.5	17.4
120	26.7	10.6	6.2	13.4	5.2	18.3	19.6
150	26	9.5	6.1	14.2	5.6	18	20.6
170	25.6	8.8	5.5	13.9	5.5	19.1	21.6
200	22.5	6.9	4.7	15	6.3	20.1	24.4
300	16.7	4.7	3.7	15.6	7.9	22.9	28.6
400	15.3	3.4	2.8	14.5	8.3	24.4	31.3
500	12.3	3	2.6	14	8.9	26.3	32.9
600	11.9	2.7	2.1	12	8.4	28	34.9
700	10.4	/	/	13	8.9	29.6	38.1
800	10.4	/	/	12.2	9.8	29.5	38.1
900	11.1	/	/	10.7	8.4	29.7	40.1
1000	6.2	/	/	9.7	8.1	33.4	42.6
1500	6.3	/	/	6.6	6.1	35.3	45.7

Table S2. The peak intensity of Ca II 393.4 nm, Sr II 407.8 nm, Ca I 422.7 nm, Sr I 460.7 nm, CaOH 554 nm, and SrOH 605 nm from 10 samples with different concentration. Data in this table correspond to Figure 5 in the manuscript. We selected the

sample of 20, 50, 400, 600, 1000, 2000, 2500 ppm as the calibration set, with the 100, 800, 1500 ppm as the prediction set. Calculate the error bar using the repeated peak intensity obtained from 10 laser pulses.

Species	Laser pulse		1	2	3	4	5	6	7	8	9	10
	Sample concentration											
Ca II	Calibration Set	20	14.92055	20.87515	15.04891	13.41021	17.71386	21.89298	13.40971	23.99448	17.16935	16.69024
		50	43.80495	42.16564	50.53535	42.37541	38.56249	49.33918	43.24142	48.78656	41.90394	53.68932
		400	234.9901	265.5613	231.1275	234.7932	232.0673	217.9418	247.8397	237.0706	237.0733	236.9983
		600	292.6944	291.5538	341.9801	294.3792	296.4072	283.46	290.057	291.6393	274.7746	285.038
		1000	381.1853	383.8576	371.8451	377.2468	375.475	385.2122	389.2142	384.9801	332.722	404.4169
		2000	554.0698	541.6968	564.174	533.9461	590.2651	499.413	540.0725	543.3196	542.7617	519.7726
	2500	613.6848	576.1615	607.8237	568.0935	632.3486	627.1459	642.4574	611.8319	582.3854	592.2181	
	Prediction Set	100	103.7495	106.4154	100.7913	95.68576	96.94882	101.9238	105.6263	103.8	94.39546	99.9731
		800	357.6771	331.0219	314.1208	345.0874	341.2995	369.3152	332.276	329.6266	355.0964	364.5397
1500		519.0058	468.0604	477.4031	468.162	486.1851	480.3839	503.0887	448.5675	464.8277	483.1634	
Ca I	Calibration Set	20	94.16566	95.74506	93.99124	89.61811	92.37885	106.6028	91.69244	95.5262	99.76464	98.05206
		50	227.6779	226.2741	234.5402	223.4602	222.9635	228.52	234.7301	227.7955	228.7181	236.2482
		400	2133.517	2194.725	2068.557	2145.955	2042.795	2071.715	2176.58	2047.712	2110.1	2125.81
		600	2682.061	2761.893	3030.081	2760.581	2809.406	2673.723	2794.641	2791.145	2629.679	2681.756
		1000	3954.541	3805.747	4033.021	3910.117	3860.165	3766.879	3993.143	3996.674	3618.568	4095.454
		2000	5745.573	5545.168	5858.57	5532.059	5926.129	5458.128	5586.414	5858.061	5582.956	5579.125
	2500	6425.741	6334.06	6476.719	6282.098	6549.021	6312.948	6506.486	6366.623	6229.273	6376.175	
	Prediction Set	100	603.3096	606.4149	603.8882	584.9709	592.9723	647.0983	646.537	658.6259	566.6898	639.0192
		800	3550.31	3384.014	3229.513	3438.92	3506.071	3475.341	3416.536	3351.107	3463.183	3499.44
1500		5334.056	4969.714	4940.218	4873.745	5115.324	5007.388	5046.454	4955.702	4911.482	4990.079	

CaOH	Calibration Set	20	26.81109	27.78908	27.51645	26.82253	24.8129	29.16061	27.60401	25.95233	26.86651	33.04958
		50	61.71866	63.98456	59.74256	55.30845	57.46366	61.08094	61.64993	55.17949	57.54853	59.6233
		400	553.2494	597.1908	599.7829	612.2962	568.0744	587.8455	567.9689	607.4775	581.1247	564.1619
		600	888.2216	832.7908	902.2039	905.5677	893.5747	872.6786	821.1079	862.7866	840.1789	888.3679
		1000	1530.614	1461.663	1451.393	1432.534	1537.64	1497.821	1474.43	1491.324	1419.688	1466.358
		2000	2848.534	2954.004	2972.213	2918.601	2991.84	2868.722	2721.264	3104.557	2745.064	2929.922
	2500	3430.762	3619.805	3541.238	3390.259	3668.238	3529.933	3560.289	3600.916	3777.585	3447.014	
	Prediction Set	100	136.7443	134.0919	140.5832	134.0159	139.3282	138.6272	143.6429	143.8853	137.8649	147.4645
		800	1175.475	1223.344	1185.514	1198.384	1195.47	1252.481	1203.445	1204.318	1186.417	1247.94
1500		2337.692	2283.68	2192.818	2215.702	2256.874	2339.502	2275.748	2264.77	2303.669	2317.257	
Sr II	Calibration Set	20	21.25844	28.14529	20.26445	22.03069	15.80073	24.61249	21.44446	20.05426	21.99138	19.97874
		50	70.64991	67.59276	69.23294	73.13641	65.90474	68.73398	69.01176	73.29287	68.16008	69.32646
		400	292.9604	317.2945	279.7392	286.1119	281.4728	288.2537	304.9437	278.9953	301.095	282.4016
		600	354.1866	361.0484	417.5706	359.9953	381.0792	350.0803	381.4598	363.3113	345.9484	341.4577
		1000	495.1922	474.0207	486.871	485.3812	481.1894	471.8581	496.2301	507.5907	439.6772	490.1897
		2000	746.3324	710.4682	742.5226	688.3153	786.5654	668.991	708.0766	724.6295	710.5325	697.9721
	2500	827.9118	782.5218	820.4385	772.4702	843.9716	818.4558	837.3981	811.826	793.3997	813.7486	
	Prediction Set	100	137.7783	134.1469	122.4243	128.5057	127.2063	133.7737	124.6757	138.3222	119.4187	132.3641
		800	468.846	427.907	404.4984	440.9167	472.2185	447.3614	426.8702	430.1658	453.2425	452.8221
1500		690.3713	608.1895	617.1743	610.8351	632.5375	630.5762	653.1129	596.1616	591.5811	603.4721	
Sr I	Calibration Set	20	42.00565	43.28455	43.48789	39.54416	42.39537	47.79337	44.89763	45.42289	46.46951	41.08374
		50	132.8361	148.6662	141.0009	139.1544	133.006	134.1055	135.7359	141.6334	138.5669	136.6349
		400	1435.183	1450.199	1352.339	1430.833	1331.949	1382.101	1445.282	1342.463	1415.945	1406.947
		600	1841.35	1839.589	2134.577	1886.537	1915.762	1854.123	1938.806	1900.294	1813.809	1778.16
		1000	3016.09	2916.397	3062.007	2968.917	2832.703	2870.233	3077.263	3026.621	2737.007	3088.677

		2000	5003.768	4722.347	5040.368	4752.521	5137.459	4713.938	4840.204	5080.197	4864.641	4846.39
		2500	5765.432	5684.738	5735.245	5636.878	5905.749	5693.483	5824.082	5716.552	5587.11	5631.128
	Prediction Set	100	356.7727	365.0379	344.8566	329.4142	343.7719	373.1699	370.0623	370.08	334.7158	374.6228
		800	2646.265	2476.875	2363.582	2564.246	2634.794	2548.151	2505.86	2426.945	2562.46	2595.838
		1500	4305.727	4034.27	4036.96	3906.62	4104.82	4080.337	4085.129	4049.43	4025.296	4104.137
	SrOH	Calibration Set	20	18.47568	17.47978	15.96529	12.90633	16.332	15.44069	19.6609	19.97659	18.78753
50			33.15672	36.40819	31.92507	33.74467	34.0939	38.53229	33.84241	32.76594	31.12317	32.13956
400			316.662	340.7843	327.9121	341.0348	323.7646	339.0352	327.0718	350.0608	348.614	320.9864
600			506.8491	486.4398	513.9102	513.3093	511.1672	508.6644	478.932	493.5562	488.5627	496.3343
1000			833.333	843.522	831.7421	806.2528	857.5652	872.9779	825.02	851.3753	808.4801	823.913
2000			1573.66	1620.392	1610.121	1643.289	1664.152	1577.695	1509.947	1747.647	1518.482	1632.743
2500			1885.306	1985.01	1867.617	1854.125	1983.926	1895.077	1901.123	1961.117	2024.862	1861.67
Prediction Set		100	75.38786	70.14912	76.21245	68.52939	68.15306	69.35999	68.35667	75.38683	72.57521	70.67712
		800	666.5837	687.5708	683.4894	694.2816	690.3584	728.3346	681.4189	695.432	678.5682	702.8182
		1500	1276.893	1229.876	1197.195	1224.946	1246.861	1244.16	1218.898	1252.661	1274.422	1289.857

Table S3. RSDs of the intensities of Ca II 393.4 nm, Ca I 422.7 nm, CaOH 554 nm, Sr II 407.8 nm, Sr I 460.7 nm, and SrOH 605 nm at 0.1 MPa. Data in this table correspond to Figure 6 in the manuscript.

Species	RSD	Error bar of RSD
Ca II	4.8	0.35
Ca I	3.1	0.55
CaOH	3	0.35
Sr II	4.5	0.5
Sr I	3.5	0.6
SrOH	3.2	0.45

Table S4. Normalized peak intensities of Ca II 393.4 nm, Ca I 422.7 nm, CaOH 554 nm, Sr II 407.8 nm, Sr I 460.7 nm, and SrOH 605 nm at pressures ranging from 0.1 to 50 MPa. Calculate the error bar using the repeated peak intensity obtained from 6 laser pulses. Data in this table correspond to Figure 7(a) in the manuscript.

Species Pressure	Ca II	Error bar of Ca II	Sr II	Error bar of Sr II	Ca I	Error bar of Ca I	Sr I	Error bar of Sr I	CaOH	Error bar of CaOH	SrOH	Error bar of SrOH
0.1	0.74499	0.00596	0.82579	0.0149	0.93869	0.0089	0.9821	0.01184	0.99018	0.00695	0.97599	0.01692
5	0.75465	0.00608	0.83214	0.01206	0.93018	0.00569	0.9442	0.00716	0.9704	0.00966	0.96864	0.0169
10	0.78053	0.0178	0.84301	0.01406	0.93473	0.00879	0.93618	0.01059	0.96951	0.00906	0.95709	0.00952
20	0.84253	0.01722	0.8859	0.01781	0.95384	0.01108	0.92376	0.01221	0.95718	0.01262	0.94152	0.00994
30	0.86898	0.01022	0.90877	0.01017	0.95427	0.00392	0.90219	0.00327	0.94286	0.01401	0.9211	0.02398
40	0.9617	0.01883	0.98081	0.01329	0.99093	0.00687	0.90494	0.00944	0.96492	0.00762	0.94542	0.01751
50	0.98526	0.01215	0.98028	0.0145	0.9808	0.00448	0.85722	0.00808	0.98675	0.00744	0.95812	0.01238

Table S5. RSDs of the intensities of Ca II 393.4 nm, Ca I 422.7 nm, CaOH 554 nm, Sr II 407.8 nm, Sr I 460.7 nm, and SrOH 605 nm at pressures ranging from 0.1 to 50 MPa. Data in this table correspond to Figure 7(b) in the manuscript.

Species	RSD	Error bar of RSD
Ca II	13.03	2.41
Ca I	6.21	1.415
CaOH	5.25	1.34
Sr II	10.22	2.17
Sr I	7.08	0.945
SrOH	7.12	1.5

Table S6. The peak intensity of Ca II 393.4 nm, Sr II 407.8 nm, Ca I 422.7 nm, Sr I 460.7 nm, CaOH 554 nm, and SrOH 605 nm from 11 samples with different concentration. Data in this table correspond to Figure 9 in the manuscript. We selected the sample of 20, 50, 200, 400, 600, 1000, 2000, 2500 ppm as the calibration set, with the 100, 800, 1500 ppm as the prediction set. Calculate the error bar using the repeated peak intensity obtained from 6 laser pulses.

Species & Pressure	Laser pulse		1	2	3	4	5	6
	Sample concentration							
Ca II & 0.1 MPa	Calibration Set	20	31.28887	32.35525	28.87713	32.34092	27.7358	30.07382
		50	64.80469	63.16485	64.51518	70.78401	60.0517	53.05441
		200	108.8347	117.6094	102.7095	139.8085	121.8883	112.7721
		400	154.9151	156.9991	161.5631	157.0232	156.3289	157.944
		600	385.7166	365.8656	335.9788	396.8617	381.2556	356.8949
		1000	490.1672	493.4971	498.5547	498.1727	507.836	502.1405
		2000	704.1339	725.935	784.5393	712.0822	724.3834	678.0722
	Prediction Set	100	96.59576	83.57463	92.69509	87.24412	82.42663	84.00943
		800	468.4677	488.9812	463.6139	526.7385	475.3143	473.4433
		1500	611.5306	592.3054	597.8162	580.1903	612.4336	622.316
Ca II & 5 MPa	Calibration Set	20	42.3795	43.85042	39.27601	47.23762	43.61397	38.32842
		50	55.82139	53.84755	67.70262	54.53384	60.13807	55.57074
		200	109.075	117.4614	110.8417	107.2583	111.1192	105.4424
		400	228.0842	267.2001	265.0159	248	262.7225	233.4705
		600	379.2275	380.3766	400.3858	398.4867	408.708	405.7117
		1000	489.5375	468.8653	434.4651	472.9059	470.3897	493.2542
		2000	719.033	821.9934	788.5966	828.9847	805.7983	725.7455

	Prediction Set	2500	925.4661	879.8426	943.1636	832.2806	872.1678	900.4009	
		100	82.75957	85.2938	86.08453	77.15382	78.21252	85.34666	
		800	470.6247	461.8089	485.8804	488.1314	468.4244	513.0882	
		1500	524.6128	531.8547	496.1499	534.571	490.5993	529.0263	
Ca II & 10 MPa	Calibration Set	20	47.7409	47.67422	37.6701	40.68185	39.90685	39.89402	
		50	62.06303	51.09483	55.88877	65.23714	64.00949	59.57392	
		200	115.9719	106.9563	97.4415	94.89004	113.7486	99.83943	
		400	288.503	260.0883	292.9308	313.5317	273.4164	267.2829	
		600	475.3361	437.2476	423.0443	434.5069	436.1627	458.41	
		1000	496.5737	432.8331	521.9859	492.513	514.0241	506.3739	
		2000	768.2806	807.2532	699.7016	766.41	805.3633	831.1062	
	2500	892.66	828.4463	866.8297	827.1301	814.2607	884.9588		
	Prediction Set	100	94.86243	80.07166	85.7025	79.88545	85.5399	97.8049	
		800	456.0406	429.7194	424.9216	433.5219	442.2048	410.3125	
		1500	632.5862	630.5255	649.8476	624.0836	637.0331	691.6994	
	Ca II & 20 MPa	Calibration Set	20	45.15305	46.74597	46.36103	49.24557	45.38829	51.43843
			50	62.00679	66.22028	60.82872	67.61959	63.72151	73.53725
200			117.8974	133.7486	125.0504	107.9376	105.4512	120.5756	
400			313.2137	332.9921	330.4703	299.4718	294.913	283.2912	
600			499.0546	474.7799	503.4166	458.1011	450.7615	506.0884	
1000			563.9936	564.4459	589.4979	570.8566	551.409	533.1257	
2000			727.8717	812.615	767.3797	703.3635	735.4343	938.6781	
2500		965.0994	967.6534	943.0836	1007.529	1014.78	974.9142		
Prediction Set		100	81.34318	84.74613	81.00243	89.59553	86.66057	90.50272	
		800	550.7991	488.8298	489.1097	466.4916	475.1909	467.3513	

		1500	644.5504	707.3505	593.8932	620.2394	661.4554	610.4617
Ca II & 30 MPa	Calibration Set	20	50.3524	41.55453	58.09092	56.36638	58.18626	45.83399
		50	61.37689	63.06587	72.44127	73.63264	56.75837	60.35472
		200	111.2094	128.2437	127.7168	124.8619	107.759	95.89192
		400	328.5741	324.0674	335.9666	327.2604	322.3312	311.2463
		600	483.1569	505.6467	487.5065	502.9213	454.6749	541.4292
		1000	563.2513	536.2952	527.8974	571.912	555.2923	556.9269
		2000	825.8931	794.681	846.191	753.5671	832.9815	805.8982
		2500	1036.068	1057.042	978.1367	997.1352	1072.709	937.8085
	Prediction Set	100	84.41686	79.56835	86.85044	91.15543	86.67365	86.15046
		800	476.1115	456.4948	471.578	457.8416	516.6055	492.2177
1500		719.3242	715.8681	669.1427	746.6259	718.4663	692.4044	
Ca II & 40 MPa	Calibration Set	20	58.88603	46.0622	58.73544	44.69584	52.15976	54.21463
		50	62.14432	66.02481	66.95082	60.62813	67.61199	73.3996
		200	113.9128	118.7501	118.2893	114.5323	133.9879	138.3494
		400	363.4629	353.2304	316.7623	341.0362	327.6111	326.8653
		600	600.3208	573.6008	555.1826	509.2489	537.4872	513.035
		1000	614.703	662.7774	609.841	634.4064	630.6279	633.0687
		2000	869.4368	932.6534	892.9047	898.6174	853.5026	1012.804
		2500	1115.595	1203.134	1168.099	1108.236	1222.136	1123.607
	Prediction Set	100	81.11882	87.74285	88.54837	76.7052	93.43568	79.67553
		800	520.7046	571.8288	609.085	549.6789	516.4453	544.2899
1500		734.5075	733.4729	734.3156	759.68	693.5475	798.3028	
Ca II	Calibration Set	20	53.78477	59.35988	47.71701	55.6053	53.48128	42.19571
		50	66.98143	64.53935	60.40895	64.34675	70.23679	71.99496

& 50 MPa		200	126.6443	141.7361	126.295	145.6089	125.7166	127.033
		400	390.0954	391.0928	398.3152	333.7797	355.8018	379.6172
		600	592.1065	571.2325	589.3823	598.2028	576.474	614.7717
		1000	583.582	608.3572	499.3642	607.6525	563.1637	554.3264
		2000	955.7817	831.9541	909.2036	798.0251	800.7863	885.6488
		2500	1214.978	1198.075	1209.541	1203.975	1329.877	1270.96
	Prediction Set	100	91.08943	92.53365	94.37694	101.137	80.72933	95.23697
		800	621.9931	726.3219	663.5263	663.4952	629.108	617.0768
		1500	672.2598	726.4569	699.2124	650.743	746.7726	699.4459
Ca I & 0.1 MPa	Calibration Set	20	80.07331	67.08762	87.69524	83.6658	83.87064	80.11935
		50	228.2124	239.5763	253.2321	249.8783	219.7208	230.1813
		200	925.8951	944.4581	912.7136	1075.167	971.0508	977.3791
		400	1591.732	1643.551	1581.22	1669.817	1595.455	1637.851
		600	4262.059	4238.425	4080.494	4157.743	4446.111	4201.901
		1000	5887.018	5893.615	6099.619	6100.749	6160.481	6045.136
		2000	8706.761	8991.761	9315.499	9023.983	8978.695	8890.66
		2500	10659.75	10616.43	10282.71	10459.97	10482.35	10861.24
	Prediction Set	100	512.1874	494.7338	487.0917	506.6341	487.1231	490.1672
		800	5336.372	5258.531	5360.013	5818.697	5385.458	5695.281
		1500	7403.665	7554.814	7484.11	7411.154	7548.758	7643.953
Ca I &	Calibration Set	20	112.2923	115.9195	127.9856	121.1483	125.7461	107.1913
		50	209.4587	227.1781	267.9825	229.8521	220.3876	236.2766
		200	877.9927	859.1525	869.982	919.1089	846.5798	904.1032
		400	2284.486	2389.456	2441.863	2297.411	2380.445	2359.009
		600	4111.98	4053.328	4267.973	4314.141	4315.131	4218.322

5 MPa		1000	5799.809	5626.202	5498.771	5858.524	5844.604	5923.686
		2000	8988.155	9503.372	9132.213	9338.737	9243.145	8945.556
		2500	10410.15	10424.18	10810.05	10296.34	10500.77	10682.03
	Prediction Set	100	471.3462	489.9998	448.3546	456.9769	472.9944	464.1953
		800	5318.48	5320.032	5489.79	5275.666	5262.013	5364.16
		1500	6670.236	6714.225	6649.941	6639.782	6751.328	6740.82
Ca I & 10 MPa	Calibration Set	20	125.479	126.5749	115.1137	114.0928	117.0714	111.3761
		50	228.6162	234.293	213.8938	220.2916	228.4554	229.4154
		200	872.7276	857.0823	835.8934	831.912	890.1882	845.4984
		400	2561.636	2345.507	2518.251	2440.086	2389.499	2467.072
		600	4352.322	4474.769	4162.184	4336.413	4510.203	4561.453
		1000	5966.917	5495.522	5864.826	5946.396	5751.342	5895.7
		2000	9064.061	9501.344	8730.109	9401.794	9239.234	9432.335
		2500	9743.954	9673.284	9921.6	9877.381	9587.797	9976.022
	Prediction Set	100	470.801	442.486	478.9495	466.6554	495.5939	475.3046
		800	4917.414	5066.972	5041.492	4831.197	5036.922	4790.355
		1500	7517.005	7445.868	7774.7	7612.101	7699.871	8030.509
	Ca I & 20 MPa	Calibration Set	20	125.0566	122.1621	113.2875	123.861	115.7515
50			232.4045	216.7148	232.3815	231.2255	219.1538	218.2895
200			849.481	892.7063	879.8905	872.7465	820.6788	935.5508
400			2585.856	2557.996	2520.821	2411.67	2459.808	2363.523
600			4514.134	4555.4	4415.656	4447.007	4364.218	4621.27
1000			6032.313	6198.076	6079.869	6151.491	6029.918	5924.481
2000			8570.828	9010.255	8700.017	8447.471	8513.71	9358.819
2500			10396.14	10520.7	10301.59	10940.68	11112.71	11115.76

	Prediction Set	100	423.4888	458.3511	427.7948	448.9076	430.5348	480.9302	
		800	5433.675	5199.123	5265.95	4991.403	5029.932	4987.51	
		1500	7619.543	7700.053	7375.259	7394.735	7828.34	7590.08	
Ca I & 30 MPa	Calibration Set	20	121.7627	116.5788	113.0324	116.7458	122.0309	107.4168	
		50	222.2484	215.6739	239.408	216.2796	230.136	201.3513	
		200	824.6179	860.6422	895.462	844.3373	861.8877	873.7216	
		400	2533.17	2406.974	2559.193	2440.373	2312.193	2413.35	
		600	4392.635	4530.117	4519.018	4581.259	4130.634	4572.457	
		1000	5819.407	5963.992	5895.882	6018.489	5963.256	6039.153	
		2000	9073.395	8911.413	9348.401	8866.341	9078.846	9277.571	
	2500	10789.79	10996.44	10484.34	10588.61	11087.96	10446.98		
	Prediction Set	100	437.2905	426.3175	456.7634	442.457	462.2806	445.9324	
		800	4929.641	4770.484	4988.986	4801.95	4915.969	4992.433	
		1500	7735.419	7733.119	7696.248	7719.08	7882.997	7688.022	
	Ca I & 40 MPa	Calibration Set	20	124.3256	102.8936	101.0128	124.02	115.6763	118.9886
			50	192.699	193.2837	198.3908	190.5228	214.0809	199.8557
200			843.5121	766.4562	832.7137	754.8491	852.2514	819.6779	
400			2457.901	2287.916	2296.635	2350.63	2434.088	2281.154	
600			4676.592	4763.391	4391.883	4453.885	4406.278	4479.984	
1000			6144.468	6241.239	5989.156	6354.328	6173.575	6163.891	
2000			9316.425	9817.543	9575.401	9734.566	9278.392	10069.57	
2500		11658.26	11626.48	11771.45	11226.25	11660.19	11348.42		
Prediction Set		100	437.0003	413.5532	388.995	422.4089	412.059	417.9941	
		800	5068.1	5083.966	5332.684	5081.762	5174.43	5063.834	
		1500	7831.422	7698.092	7892.229	7943.676	7491.779	8245.435	

Ca I & 50 MPa	Calibration Set	20	121.0169	119.6253	106.1984	115.5103	111.6323	109.0495
		50	194.029	215.2472	217.5942	227.3086	222.3485	208.1523
		200	772.092	792.4909	816.6306	785.8355	798.7511	778.6103
		400	2325.734	2374.423	2469.009	2242.759	2228.918	2483.334
		600	4639.78	4359.736	4598.001	4512.633	4566.999	4627.445
		1000	5639.52	5753.851	5390.943	5878.923	5520.479	5461.277
		2000	9607.995	9183.599	9429.37	8864.749	8893.81	9348.956
	2500	11765	11707.71	11913.93	11665.9	12327.3	12060.01	
	Prediction Set	100	418.5638	388.158	412.009	421.0809	410.0846	376.6035
		800	5490.848	5802.094	5574.221	5641.043	5379.569	5311.755
1500		7292.333	7792.102	7527.581	7515.538	7765.167	7511.359	
Sr II & 0.1 MPa	Calibration Set	20	27.51064	24.23143	28.99346	30.1393	32.13978	37.24352
		50	81.44161	72.48982	78.46996	86.73776	68.55095	81.1401
		200	152.1981	173.9533	180.2585	182.8494	186.2323	181.2834
		400	234.1002	229.4427	247.4975	248.1996	242.918	264.6497
		600	582.7376	588.3974	540.0567	605.5586	639.4138	581.1721
		1000	824.7574	825.1709	853.6223	899.5382	846.1027	852.1698
		2000	1223.589	1272.241	1317.302	1266.231	1297.45	1204.524
	2500	1598.782	1582.505	1533.4	1562.074	1508.54	1598.818	
	Prediction Set	100	123.9448	123.3548	135.3462	119.5516	117.3634	129.1264
		800	681.4113	752.2258	722.3387	817.7673	740.8083	789.4928
1500		991.3204	1111.799	988.8906	1048.253	1051.056	1051.819	
Sr II	Calibration Set	20	36.6631	40.18117	35.94642	37.72352	47.51528	35.84997
		50	77.48063	68.66202	84.99328	79.31886	84.13038	79.76684
		200	167.8462	178.1064	178.6589	159.3479	175.7922	168.9967

& 5 MPa		400	361.2472	401.4008	400.6057	394.8443	433.0931	357.9969
		600	591.0435	589.3324	609.8004	654.8362	673.6848	631.1632
		1000	778.3797	780.2242	765.702	791.2128	846.8084	797.5243
		2000	1255.728	1483.251	1343.938	1402.392	1335.426	1285.492
		2500	1593.956	1564.036	1577.022	1518.082	1545.393	1563.711
	Prediction Set	100	103.6265	121.6767	125.316	105.2773	113.1541	123.0367
		800	735.6354	753.424	777.292	753.7197	747.1371	752.2808
		1500	918.5154	893.6373	849.1216	884.3908	861.5122	898.9054
& Sr II & 10 MPa	Calibration Set	20	43.82839	35.45514	32.58979	37.4971	36.21382	41.21446
		50	75.02837	80.71205	77.60027	79.33284	92.06833	83.96036
		200	157.0209	160.7796	155.653	160.2741	164.3223	153.4711
		400	460.8176	405.9464	485.6089	457.4882	438.193	442.7019
		600	687.5459	691.6856	636.3771	631.286	663.961	733.7909
		1000	869.0215	760.1345	806.6731	841.7403	768.0678	801.0273
		2000	1254.448	1407.555	1277.594	1378.229	1408.27	1404.137
		2500	1413.21	1360.25	1508.535	1438.042	1413.921	1478.522
	Prediction Set	100	129.7106	103.1116	108.7642	134.3467	113.3649	129.3425
		800	647.891	696.2542	632.8459	667.1635	680.0436	639.4715
1500		1051.58	1026.581	1099.358	1024.745	1078.705	1157.013	
& Sr II & 20 MPa	Calibration Set	20	36.69102	41.56465	36.98111	37.92145	52.66658	43.32288
		50	80.25848	87.40116	77.10406	79.69234	87.23504	92.89527
		200	161.2681	150.4172	160.8258	182.1167	145.7813	179.3371
		400	478.8505	480.636	463.7136	465.7606	461.4086	445.4352
		600	716.0326	700.1356	698.2391	719.8258	687.1807	724.2146
		1000	896.1187	911.6398	902.5767	940.3157	854.0666	886.0448

	Prediction Set	2000	1250.933	1290.14	1216.456	1237.984	1273.711	1453.107	
		2500	1587.658	1580.112	1581.176	1706.467	1654.753	1693.897	
		100	106.7244	132.5035	122.737	128.9346	123.0439	118.3026	
		800	846.0333	777.8646	732.7911	705.1654	755.7357	729.2561	
		1500	1051.997	1052.889	999.1531	972.162	1077.338	1079.103	
Sr II & 30 MPa	Calibration Set	20	46.82372	38.76081	40.44851	46.88161	43.71329	43.5766	
		50	84.53149	78.78419	98.09559	105.869	87.09249	71.18711	
		200	166.5785	183.2008	178.9348	162.3027	166.9183	162.104	
		400	532.8755	506.5491	490.6891	456.883	476.0822	470.2149	
		600	744.4647	734.5599	737.2322	751.6211	639.2879	822.2103	
		1000	859.8706	865.0127	878.0708	904.9778	897.5608	871.6381	
		2000	1318.771	1297.709	1373.486	1305.68	1257.544	1334.192	
		2500	1735.752	1689.816	1623.359	1635.231	1739.878	1551.251	
	Prediction Set	100	133.6509	116.6536	125.3276	130.6005	143.8734	128.4221	
		800	775.6003	692.3117	710.4684	703.9469	752.135	766.0323	
		1500	1154.343	1140.029	1089.147	1172.635	1139.3	1136.38	
	Sr II & 40 MPa	Calibration Set	20	40.51823	42.1623	41.01191	54.5763	45.68267	53.98744
			50	69.95632	77.81307	85.3152	70.63915	86.63597	86.75568
200			178.0157	159.6043	178.9681	178.8731	151.7748	185.2963	
400			524.6237	486.8178	517.2114	480.8273	514.1207	467.3758	
600			852.4777	823.2721	775.0708	760.9247	816.2715	756.91	
1000			1000.608	940.5794	904.7699	1042.351	945.9492	972.1896	
2000			1379.972	1510.104	1472.71	1438.119	1394.506	1506.754	
2500			1837.526	1994.867	1853.254	1781.928	1845.991	1754.058	
Prediction		100	111.6783	122.1592	117.2831	117.215	118.8049	125.88	

	Set	800	802.37	783.6855	868.5091	788.2693	761.8216	764.3969
		1500	1197.37	1182.712	1150.757	1224.853	1112.555	1342.357
Sr II & 50 MPa	Calibration Set	20	45.35214	54.59156	42.73063	41.96766	44.88479	38.32973
		50	80.1764	95.93443	86.45211	95.38073	87.85089	101.9469
		200	186.0189	193.0916	168.2408	179.9639	178.9686	174.7772
		400	508.3358	535.3861	511.5849	500.8353	474.7637	525.5451
		600	857.1599	853.7033	801.2955	787.0055	821.846	856.7291
		1000	906.4098	923.3419	846.8904	877.9819	819.9585	825.9586
		2000	1482.494	1336.604	1465.093	1278.155	1328.858	1397.092
	Prediction Set	2500	1887.973	1882.352	1890.164	1842.618	2052.235	1998.124
		100	113.5638	106.7648	115.4386	138.1908	109.8986	118.2839
		800	858.7499	992.3203	897.0624	915.8373	872.6544	869.7044
		1500	1032.36	1153.979	1095.444	1121.373	1183.873	1137.91
Sr I & 0.1 MPa	Calibration Set	20	27.86257	26.83278	33.21546	29.56875	27.9381	28.70925
		50	117.7179	115.3744	126.7541	119.6643	118.2276	115.287
		200	528.5288	546.5085	488.6159	564.3507	551.3443	536.1561
		400	1094.635	1062.427	1065.835	1096.472	1019.767	1040.318
		600	2787.572	2693.097	2580.588	2633.835	2786.965	2631.62
		1000	3958.568	4078.535	4185.177	4187.883	4142.538	4119.077
		2000	6806.793	7231.333	7236.54	7130.818	7015.364	7153.267
	Prediction Set	2500	8836.364	8878.169	8563.285	8882.581	8684.598	9164.229
		100	275.1065	223.1327	263.2173	271.1258	261.4261	245.3807
		800	3483.692	3483.397	3556.849	3764.395	3471.102	3738.775
		1500	5476.646	5592.744	5498.391	5504.343	5599.19	5725.444
	Calibration	20	46.48862	36.33579	48.82379	46.54736	41.38566	36.36484

Sr I & 5 MPa	Set	50	111.9671	104.9949	118.4086	106.9967	108.5109	114.4407
		200	518.6359	496.5102	469.0274	482.1227	465.6779	491.7982
		400	1236.294	1322.965	1389.696	1271.107	1396.082	1310.393
		600	2434.916	2577.481	2652.397	2649.03	2753.783	2610.93
		1000	3862.885	3835.001	3619.306	3913.257	3859.722	3918.704
		2000	7024.817	7556.78	7202.488	7483.033	7269.68	6970.983
		2500	8488.127	8456.828	8509.831	8181.534	8476.221	8681.373
	Prediction Set	100	244.6484	245.568	228.6322	259.5607	230.2142	262.747
		800	3308.929	3265.036	3433.499	3222.871	3252.564	3322.5
1500		4860.046	4903.324	4926.026	4861.036	4944.201	4907.293	
Sr I & 10 MPa	Calibration Set	20	40.34077	51.07428	41.20048	45.22613	36.20606	46.59682
		50	107.9541	112.9284	112.893	97.23641	112.5757	102.402
		200	470.3556	472.4479	437.8072	460.0463	481.8124	488.9488
		400	1381.908	1311.429	1407.751	1383.711	1294.014	1299.115
		600	2699.903	2772.266	2579.441	2629.865	2702.259	2746.154
		1000	3898.394	3639.295	3925.486	3947.688	3786.836	3818.714
		2000	6895.955	7261.094	6797.401	7133.429	6958.317	7263.846
		2500	7998.503	7804.719	8221.393	7943.33	7735.687	8265.722
	Prediction Set	100	240.8895	235.3337	264.4473	258.878	242.1282	234.4202
		800	3107.743	3088.35	3051.809	2872.454	3092.537	2948.174
		1500	5385.766	5319.829	5600.139	5423.204	5458.296	5733.028
Sr I &	Calibration Set	20	46.5803	51.69212	39.17468	38.86789	44.98191	45.6358
		50	118.8906	131.3129	114.4696	105.3554	101.6095	106.5163
		200	457.5631	496.8187	514.0613	481.0715	446.6575	487.5692
		400	1314.674	1298.317	1310.165	1304.067	1270.316	1280.235

20 MPa		600	2620.096	2633.595	2646.391	2725.335	2624.02	2728.606
		1000	3819.508	3860.358	3792.721	3763.839	3813.335	3749.044
		2000	6405.266	6690.687	6526.414	6429.339	6435.137	7044.058
		2500	8062.923	8191.161	8078.864	8436.497	8556.459	8744.51
	Prediction Set	100	228.063	213.6941	229.2821	218.6941	214.4949	235.2405
		800	3215.162	3124.73	3084.512	3063.023	3075.43	2993.594
		1500	5162.154	5283.827	5151.383	5188.513	5353.806	5187.484
Sr I & 30 MPa	Calibration Set	20	42.44703	43.44278	40.38031	50.73071	55.07008	48.23243
		50	101.4485	109.7367	105.7271	113.6501	115.2571	96.34519
		200	440.6688	441.8849	470.5447	446.3977	453.5999	435.1686
		400	1292.891	1243.652	1257.849	1245.994	1183.868	1262.713
		600	2517.853	2585.819	2623.398	2592.439	2352.106	2643.718
		1000	3579.707	3647.255	3662.723	3677.533	3698.323	3649.982
		2000	6632.291	6447.962	6795.462	6693.939	6411.726	6572.059
		2500	8098.755	8289.197	8080.995	8078.568	8490.134	7935.525
	Prediction Set	100	213.4394	221.1251	249.2995	231.3704	237.9455	229.554
		800	2816.96	2765.681	2866.588	2843.373	2839.769	2859.125
		1500	5260.152	5327.406	5132.096	5234.308	5289.833	5271.23
Sr I & 40 MPa	Calibration Set	20	37.14189	35.69216	42.83953	36.10324	35.70829	49.09905
		50	97.63236	103.0207	106.0102	96.97937	96.05687	98.72298
		200	441.7887	416.1874	437.3688	407.1958	428.2179	435.5552
		400	1234.95	1185.921	1141.888	1152.156	1203.714	1149.07
		600	2518.863	2599.329	2442.434	2430.56	2394.429	2504.266
		1000	3574.932	3620.269	3431.327	3729.305	3547.58	3510.546
		2000	6503.087	6887.322	6622.316	6755.259	6496.798	6972.539

	Prediction Set	2500	8593.36	8720.247	8552.177	8325.634	8655.109	8397.792	
		100	232.4112	208.1863	214.335	200.1807	212.0199	209.9438	
		800	2851.436	2871.138	2969.692	2831.527	2916.608	2839.053	
		1500	5091.366	5090.256	5066.117	5106.07	4855.115	5292.604	
Sr I & 50 MPa	Calibration Set	20	42.67509	42.36552	40.85819	35.94955	37.29142	36.67717	
		50	88.11026	105.4865	102.4091	96.79651	111.0385	103.5477	
		200	408.5271	429.6068	415.4842	427.6869	420.9433	408.1766	
		400	1136.183	1165.526	1194.377	1026.883	1089.278	1217.677	
		600	2394.533	2260.468	2397.528	2387.48	2437.773	2330.017	
		1000	3246.913	3310.177	3053.533	3347.113	3269.305	3051.073	
		2000	6481.97	6062.229	6269.588	5743.323	6049.56	6265.078	
	2500	8286.736	8334.588	8346.926	8154.33	8543.207	8466.448		
	Prediction Set	100	194.5255	199.3982	201.3216	212.9716	211.3591	213.2545	
		800	2906.647	3031.01	2948.154	2981.356	2896.26	2928.672	
		1500	4485.87	4680.479	4598.548	4652.388	4852.734	4567.362	
	CaOH & 0.1 MPa	Calibration Set	20	21.00269	19.52805	19.44661	21.53369	21.88119	17.76221
			50	40.26679	37.53911	44.747	46.05947	43.97664	39.05375
200			148.945	155.1614	157.1569	150.2264	153.9614	147.7779	
400			296.2549	268.8232	272.6581	281.3672	259.7656	270.06	
600			417.9963	438.4876	441.4103	456.3763	462.6681	465.3429	
1000			651.9136	661.3515	708.9546	665.0224	688.8905	639.8691	
2000			1430.583	1392.795	1405.17	1386.518	1389.681	1420.915	
2500		1820.641	1712.888	1685.688	1795.094	1754.795	1711.016		
Prediction Set		100	74.22057	71.72937	70.46044	70.93931	65.30996	64.62873	
		800	587.3998	624.7985	623.5674	582.4952	599.5272	609.264	

		1500	998.6166	987.2388	983.1591	994.0509	1004.578	993.8787
CaOH & 5 MPa	Calibration Set	20	34.66088	30.06959	26.92764	25.99404	24.39259	28.42447
		50	40.00741	40.62175	40.65655	39.5363	38.55682	45.36574
		200	147.2165	156.4918	153.1001	138.6321	146.4784	153.7401
		400	236.9747	225.5662	234.2734	240.4515	218.577	231.9223
		600	448.2607	443.1236	447.5068	465.4029	446.7518	451.3095
		1000	715.8959	739.0497	675.075	687.7308	715.307	715.8006
		2000	1394.955	1371.118	1350.641	1357.151	1362.77	1381.91
		2500	1664.689	1755.257	1643.682	1694.429	1696.761	1679.925
	Prediction Set	100	65.09717	66.8785	68.02122	73.53105	73.10604	80.29927
		800	557.1663	609.9075	543.8813	580.6245	568.7568	568.1693
1500		962.2867	963.7021	1038.931	971.3661	983.7903	996.1624	
CaOH & 10 MPa	Calibration Set	20	26.92973	31.41811	27.74505	27.96124	29.24088	30.56187
		50	48.37021	48.89616	45.99867	44.66954	41.82634	50.83592
		200	150.2508	155.3815	151.9007	150.5212	142.2582	153.3961
		400	245.681	233.9854	229.7873	230.369	212.4184	252.7646
		600	434.9835	430.1494	443.7578	446.3133	464.718	443.6725
		1000	703.4463	667.5186	687.5299	688.0872	676.1957	664.8514
		2000	1375.012	1318.883	1352.716	1353.873	1331.84	1363.502
		2500	1668.685	1709.567	1703.98	1654.946	1697.639	1663.387
	Prediction Set	100	74.34917	95.43121	78.29346	78.3647	67.25454	73.58522
		800	575.4827	548.7775	561.2184	551.6567	591.5532	577.0841
1500		1026.02	1084.127	1038.877	968.6298	982.1061	1058.855	
CaOH	Calibration Set	20	25.62269	32.94461	28.10934	29.95756	28.63146	26.04209
		50	51.68497	49.76192	46.70825	43.32302	48.19567	49.8689

& 20 MPa		200	157.4181	166.9094	160.3754	149.5396	146.3505	156.4089
		400	215.9555	239.9996	253.6162	241.5261	233.1435	230.2564
		600	434.5987	450.6162	424.8372	439.8615	429.445	417.5544
		1000	681.1003	695.1241	675.0396	695.5289	669.8266	709.1319
		2000	1262.266	1238.019	1293.49	1325.361	1287.79	1208.932
		2500	1728.935	1732.302	1657.741	1633.343	1699.846	1607.554
	Prediction Set	100	82.75725	69.90098	81.91716	70.43191	75.36571	79.10502
		800	556.6808	563.8423	578.4855	575.0638	575.7619	556.5349
		1500	1060.331	1047.403	1037.421	1010.622	1016.027	1011.895
CaOH & 30 MPa	Calibration Set	20	24.68539	28.3682	33.95234	26.96038	28.50807	28.171
		50	50.14016	53.52839	49.33033	45.94484	50.2822	41.74626
		200	163.3612	149.4812	152.7637	147.9991	166.4183	162.7777
		400	247.5298	233.0957	222.8452	234.2303	224.2685	231.1955
		600	478.1669	463.7006	457.3354	469.6942	445.5063	454.0159
		1000	699.2466	635.9779	681.0714	696.1517	702.8948	733.5411
		2000	1224.853	1260.37	1228.635	1241.018	1247.267	1209.269
		2500	1600.389	1642.374	1609.44	1686.078	1698.47	1525.428
	Prediction Set	100	71.02532	71.92746	70.04602	75.91419	77.48098	72.0784
		800	548.2656	549.1447	583.2266	543.0577	541.4293	530.2091
		1500	1056.5	999.7832	1015.02	992.5774	1043.947	972.8128
CaOH &	Calibration Set	20	27.76094	30.47187	26.83148	26.11508	32.766	24.07731
		50	52.79455	47.33617	49.41627	49.89065	44.60296	53.74314
		200	172.9586	156.5551	150.5298	165.4009	176.1771	156.5894
		400	213.295	228.2785	247.925	225.1049	231.4758	220.819
		600	459.7354	445.164	463.2541	453.0455	459.6373	474.3833

40 MPa		1000	714.4658	691.2201	698.1056	692.8671	668.3989	683.7613
		2000	1406.485	1420.113	1350.871	1333.609	1379.526	1287.418
		2500	1674.156	1657.799	1665.475	1635.166	1620.975	1657.301
	Prediction Set	100	86.79482	80.08275	86.72175	76.52906	83.65297	78.01127
		800	517.9949	529.3699	570.6331	578.309	559.7086	558.3036
		1500	964.2137	1010.169	1006.221	1010.93	967.5689	992.3062
CaOH & 50 MPa	Calibration Set	20	28.30746	31.49918	31.57479	31.23384	38.74948	30.37057
		50	59.25007	54.35627	49.49549	49.69952	45.73505	47.96346
		200	148.7298	148.342	155.6765	162.2707	161.896	168.2342
		400	214.3105	230.7976	227.1034	223.708	245.3031	236.1337
		600	437.2535	429.9229	443.1411	438.6807	430.7268	437.4127
		1000	671.0099	686.9647	665.8421	681.5481	720.6045	686.613
		2000	1306.345	1284.946	1328.618	1354.658	1340.725	1303.46
		2500	1748.01	1807.284	1777.928	1770.576	1785.709	1776.046
	Prediction Set	100	91.93071	91.27236	100.7707	80.92916	89.89996	87.88518
		800	626.8844	644.779	609.8517	601.5431	612.1309	610.9787
		1500	1006.646	1001.645	980.8911	1041.967	1000.631	996.0043
	SrOH & 0.1 MPa	Calibration Set	20	13.9961	10.80146	14.44847	10.71789	14.18265
50			24.18959	22.18994	26.28257	31.40315	20.92884	19.47522
200			70.77497	69.32183	69.3097	72.34944	77.69207	86.94737
400			145.5375	139.5064	157.6147	148.6272	155.0207	148.0686
600			212.6813	218.7068	206.4013	229.5318	210.8314	234.2745
1000			293.3396	324.218	362.063	317.213	339.5319	295.8232
2000			669.3457	629.2755	657.5749	682.7409	666.2009	675.3791
2500			836.4359	809.6553	813.5838	850.7025	805.0529	774.6426

	Prediction Set	100	41.83267	41.63069	38.78255	40.7839	32.53216	36.31066	
		800	285.2298	293.9809	296.3962	304.2617	281.0049	257.3304	
		1500	481.1657	457.6527	464.6202	453.4504	452.8626	460.1954	
SrOH & 5 MPa	Calibration Set	20	16.33414	17.05783	17.79625	16.88354	14.27442	15.49304	
		50	22.76442	27.13398	30.06378	25.12627	23.81182	20.02808	
		200	84.75316	89.57894	72.66667	71.33569	76.77766	75.08817	
		400	104.6187	134.5838	121.8281	109.2026	108.1907	110.5852	
		600	226.6354	233.9273	228.983	211.7862	221.8039	208.2157	
		1000	354.1934	337.0711	373.9879	341.1649	324.2977	337.3609	
		2000	684.4173	675.9289	655.5741	654.9197	660.7005	627.6123	
	Prediction Set	2500	778.762	777.8074	820.0084	802.4962	811.0383	780.6157	
		100	32.22574	42.14722	39.52742	44.44384	43.45476	48.07485	
		800	266.561	292.1994	255.7364	252.0354	240.447	318.1765	
			1500	478.2368	465.0422	503.207	464.0006	480.3571	458.3122
	SrOH & 10 MPa	Calibration Set	20	12.06019	15.52042	19.32741	15.48274	16.06906	17.77586
			50	24.32402	27.42065	26.36462	29.59303	23.47124	22.09914
200			76.68931	71.09408	79.02275	79.8	79.57108	80.34006	
400			117.8934	104.1994	118.7809	107.487	108.4305	112.671	
600			227.3079	219.4507	215.2855	218.7616	238.4974	233.6331	
1000			315.0653	314.5719	311.3436	333.7189	322.3128	332.104	
2000			683.8744	637.5854	628.5461	651.4971	619.4418	652.5025	
Prediction Set		2500	771.1325	786.4328	781.8577	753.2256	817.7428	788.4457	
		100	50.03281	48.07072	46.51377	41.24473	38.08059	36.61219	
		800	259.4817	246.8402	272.8441	279.909	266.709	261.1826	
			1500	469.779	513.5458	513.6755	455.3349	485.7292	516.3047

SrOH & 20 MPa	Calibration Set	20	13.72334	15.25381	14.67151	20.29299	17.60694	18.4448
		50	26.52109	23.46354	24.40594	23.89776	21.30889	30.47095
		200	73.58311	86.92616	89.57818	78.73764	85.06148	85.87054
		400	116.2645	120.5795	117.0607	137.3075	108.8164	120.5138
		600	240.9816	200.5326	202.4604	218.8546	210.9607	221.8465
		1000	314.5661	336.6994	350.7365	318.8684	308.4051	332.9716
		2000	587.9519	596.9183	599.7599	669.41	639.8621	590.957
	2500	790.9989	750.494	811.77	757.3143	820.0861	774.733	
	Prediction Set	100	38.33367	43.7932	37.90875	44.32041	37.67538	42.47054
		800	252.0702	246.7731	250.3444	269.6199	241.8001	271.6318
1500		502.3261	480.5403	454.6315	452.3891	470.3247	492.8471	
SrOH & 30 MPa	Calibration Set	20	14.58785	18.74914	16.16827	17.00104	17.63999	15.22061
		50	27.44403	26.81919	27.30313	31.0609	27.98513	25.2681
		200	81.21125	87.52456	79.86749	76.95555	75.74839	77.83552
		400	115.486	99.59496	108.1448	105.4952	116.9752	109.7038
		600	213.0583	202.9122	210.326	227.4368	198.8237	209.0254
		1000	329.0032	331.7612	299.6533	325.6184	315.4099	358.9238
		2000	601.5675	614.6563	581.6025	618.9681	608.1832	595.0548
	2500	703.8213	737.358	749.7386	843.4014	791.459	689.7556	
	Prediction Set	100	43.89989	37.53417	34.37388	39.00114	38.08135	39.18133
		800	243.876	248.6821	267.8878	264.9984	236.77	231.6645
1500		451.369	485.1619	515.8713	476.7906	484.3594	466.6558	
SrOH	Calibration Set	20	18.36831	12.09694	16.98374	14.09924	17.91112	17.82226
		50	28.78824	32.59755	28.34013	33.25444	28.3615	27.8867
		200	78.41996	87.33869	90.33931	81.8863	80.44234	72.91068

& 40 MPa		400	126.0176	109.2091	105.4327	116.8997	111.3266	109.1789
		600	198.9179	238.7304	220.8122	207.0519	216.2409	216.636
		1000	306.2392	335.2293	308.3651	341.5131	301.3794	310.3537
		2000	646.4278	672.264	646.3145	666.0921	692.8541	618.082
		2500	766.228	770.1176	797.8917	742.1101	771.5595	750.3843
	Prediction Set	100	46.56149	46.05004	44.48697	38.71604	43.02664	46.73881
		800	240.4492	235.9088	270.689	248.9782	253.1577	256.0321
		1500	443.4969	490.1997	498.3896	485.503	458.5025	487.2185
SrOH & 50 MPa	Calibration Set	20	17.67876	20.07582	15.53299	15.06017	17.54958	16.7894
		50	29.71652	27.86671	28.57431	27.68076	28.01211	30.50113
		200	72.63104	72.20164	78.95441	85.79872	78.56612	79.81541
		400	115.015	130.2768	101.0195	122.2894	108.353	102.4993
		600	194.7228	201.3789	217.4897	214.2641	197.5446	206.3114
		1000	308.3062	356.1356	328.1096	316.2456	316.7781	329.2017
		2000	615.4364	619.2777	659.6721	598.3343	626.9827	605.9794
		2500	793.0992	830.3481	781.8492	792.5616	796.124	833.3137
	Prediction Set	100	48.46706	42.53327	41.86504	50.90973	39.17787	46.5602
		800	284.2743	309.0111	278.0837	282.6427	280.0391	287.5823
		1500	491.6832	470.5115	458.4066	513.4858	495.4203	478.7217