Table S1 Sound speeds and apparent molar isentropic compressions for alanine in aqueous solution at 298.15 K and p = 0.1 MPa

m/mol kg^{-1}	u^a/m s^{-1}	$10^{15}\,K_{s,\phi}$/m^3 mol^{-1} Pa^{-1}	m/mol kg^{-1}	u^a/m s^{-1}	$10^{15}\,K_{s,\phi}$/m^3 mol^{-1} Pa^{-1}
0.03909	1499.227	–24.76(0.11)[b]	0.09995	1503.177	–24.60(0.04)[b]
0.04246	1499.450	–24.83(0.10)	0.11336	1504.024	–24.45(0.04)
0.05326	1500.171	–24.98(0.08)	0.12554	1504.853	–24.61(0.03)
0.05521	1500.294	–24.94(0.08)	0.13713	1505.592	–24.52(0.03)
0.06494	1500.929	–24.91(0.06)	0.14950	1506.378	–24.43(0.03)
0.07688	1501.695	–24.77(0.05)	0.16356	1507.280	–24.36(0.03)
0.08876	1502.475	–24.79(0.05)			

[a] The uncertainty of u is ± 0.005 m s^{-1}. [b] Estimated uncertainties are in parentheses.

Table S2 Sound speeds for aqueous solutions of alanine and the ala(gly)$_n$ peptides at 298.15 K and pressures in the range 5.0 to 100.0 MPa

m/mol kg^{-1}	u^a/m s^{-1}						
	p/MPa						
	5.0	10.0	20.0	40.0	60.0	80.0	100.0
	alanine						
0.04718	1508.05	1516.44	1533.23	1566.74	1600.16	1633.48	1666.53
0.05996	1508.84	1517.21	1533.97	1567.49	1600.90	1634.19	1667.26
0.08010	1510.11	1518.49	1535.22	1568.74	1602.12	1635.37	1668.44
0.10013	1511.39	1519.74	1536.46	1569.94	1603.30	1636.52	1669.56
0.12045	1512.75	1521.13	1537.85	1571.30	1604.63	1637.90	1670.87
0.14028	1514.01	1522.36	1539.11	1572.59	1605.86	1639.06	1672.05
0.16292	1515.47	1523.83	1540.55	1573.97	1607.29	1640.48	1673.41
	alagly						
0.05333	1509.68	1518.03	1534.82	1568.33	1601.79	1635.07	1668.13
0.07135	1511.25	1519.63	1536.43	1569.92	1603.34	1636.63	1669.62
0.08857	1512.73	1521.13	1537.91	1571.43	1604.81	1638.08	1671.09
0.10709	1514.34	1522.71	1539.47	1573.01	1606.41	1639.65	1672.61
0.12555	1515.95	1524.34	1541.12	1574.63	1608.03	1641.18	1674.14
0.14389	1517.54	1525.92	1542.7	1576.21	1609.55	1642.71	1675.66
	ala(gly)$_2$						
0.05330	1510.63	1519.04	1535.79	1569.36	1602.81	1636.09	1669.17
0.06806	1512.20	1520.61	1537.34	1570.93	1604.38	1637.63	1670.73
0.08763	1514.30	1522.65	1539.41	1573.00	1606.41	1639.70	1672.73
0.10530	1516.12	1524.52	1541.34	1574.86	1608.25	1641.51	1674.49

0.12214	1517.86	1526.26	1543.09	1576.61	1610.02	1643.25	1676.21
0.14172	1519.93	1528.32	1545.14	1578.68	1612.08	1645.26	1678.22
0.15648	1521.40	1529.80	1546.62	1580.16	1613.57	1646.76	1679.70
			ala(gly)$_3$				
0.02330	1507.78	1516.19	1533.00	1566.55	1600.02	1633.35	1666.48
0.02673	1508.17	1516.57	1533.41	1566.97	1600.46	1633.80	1666.93
0.03064	1508.64	1517.08	1533.91	1567.46	1600.94	1634.26	1667.38
0.03437	1509.16	1517.54	1534.32	1567.92	1601.43	1634.71	1667.83
0.03634	1509.36	1517.79	1534.56	1568.17	1601.65	1634.96	1668.08
0.04103	1509.94	1518.35	1535.14	1568.74	1602.24	1635.52	1668.63
0.04697	1510.67	1519.05	1535.90	1569.45	1602.93	1636.25	1669.35
			ala(gly)$_4$				
0.02476	1508.37	1516.75	1533.54	1567.15	1600.63	1633.98	1667.10
0.02804	1508.79	1517.20	1533.99	1567.59	1601.09	1634.43	1667.57
0.03087	1509.23	1517.62	1534.47	1567.99	1601.48	1634.85	1667.96
0.03397	1509.68	1518.05	1534.88	1568.43	1601.93	1635.29	1668.40
0.03663	1510.02	1518.39	1535.25	1568.81	1602.29	1635.67	1668.78
0.03982	1510.45	1518.88	1535.71	1569.28	1602.80	1636.10	1669.23

[a] The estimated uncertainty of u is ± 0.03 m s^{-1}.

Table S3 Coefficients of eqn. (26) for aqueous solutions of alanine and the ala(gly)$_n$ peptides at 298.15 K

m/mol kg^{-1}	$10^7 c_0$/m^{-2}s^2	$10^{10} c_1$/m^{-2}s^{2}MPa^{-1}	$10^{12} c_2$/m^{-2}s^{2}MPa^{-2}	$10^{15} c_3$/m^{-2}s^{2}MPa^{-3}
		alanine		
0.04718	$4.4937_2(0.0001_4)$	$-9.53_4(0.01_6)$	$1.75_6(0.03_8)$	$-2.4_3(0.2_4)$
0.05996	4.48915(0.00005)	$-9.498_7(0.005_7)$	$1.72_2(0.01_4)$	$-2.27_9(0.08_7)$
0.08010	$4.4817_7(0.0001_3)$	$-9.44_1(0.01_4)$	$1.61_8(0.03_4)$	$-1.4_2(0.2_2)$
0.10013	4.47461(0.00006)	$-9.421_7(0.006_8)$	$1.68_0(0.01_6)$	$-2.1_2(0.1_0)$
0.12045	$4.4671_0(0.0001_1)$	$-9.40_9(0.01_2)$	$1.70_1(0.03_0)$	$-2.2_4(0.1_9)$
0.14028	$4.4600_8(0.0001_0)$	$-9.40_1(0.01_1)$	$1.74_1(0.02_7)$	$-2.5_0(0.1_8)$
0.16292	4.45187(0.00007)	$-9.354_3(0.007_9)$	$1.69_0(0.01_9)$	$-2.2_0(0.1_2)$
		alagly		
0.05333	$4.4847_9(0.0001_2)$	$-9.49_5(0.01_4)$	$1.72_8(0.03_3)$	$-2.2_8(0.2_1)$
0.07135	$4.4759_7(0.0001_5)$	$-9.47_3(0.01_7)$	$1.73_6(0.04_0)$	$-2.3_2(0.2_6)$
0.08857	$4.4676_8(0.0001_0)$	$-9.45_2(0.01_1)$	$1.75_2(0.02_7)$	$-2.4_6(0.1_7)$
0.10709	4.45872(0.00007)	$-9.405_7(0.007_2)$	$1.70_2(0.01_7)$	$-2.1_4(0.1_1)$
0.12555	4.44985(0.00006)	$-9.399_1(0.006_3)$	$1.75_2(0.01_5)$	$-2.4_4(0.1_0)$
0.14389	4.44109(0.00005)	$-9.370_2(0.005_7)$	$1.75_6(0.01_4)$	$-2.50_5(0.08_8)$
		ala(gly)$_2$		
0.05330	4.47965(0.00006)	$-9.485_4(0.006_5)$	$1.73_2(0.01_6)$	$-2.3_2(0.1_0)$
0.06806	4.47101(0.00009)	$-9.45_9(0.01_0)$	$1.73_2(0.02_4)$	$-2.3_5(0.1_5)$
0.08763	$4.4595_9(0.0001_2)$	$-9.41_4(0.01_4)$	$1.70_5(0.03_3)$	$-2.1_9(0.2_1)$
0.10530	$4.4495_3(0.0001_1)$	$-9.40_3(0.01_2)$	$1.75_0(0.02_9)$	$-2.4_5(0.1_9)$
0.12214	4.43997(0.00008)	$-9.368_3(0.009_1)$	$1.72_9(0.02_2)$	$-2.3_2(0.1_4)$

0.14172	4.42885(0.00005)	$-9.342_2(0.005_1)$	$1.74_9(0.01_3)$	$-2.46_0(0.08_0)$
0.15648	4.42067(0.00009)	$-9.29_6(0.01_0)$	$1.69_3(0.02_4)$	$-2.1_4(0.1_6)$
		ala(gly)$_3$		
0.02330	4.49560(0.00007)	$-9.543_5(0.007_3)$	$1.74_9(0.01_8)$	$-2.3_9(0.1_1)$
0.02673	$4.4934_0(0.0001_2)$	$-9.53_3(0.01_3)$	$1.72_8(0.03_2)$	$-2.2_5(0.2_1)$
0.03064	$4.4907_6(0.0001_2)$	$-9.53_5(0.01_3)$	$1.75_7(0.03_3)$	$-2.4_3(0.2_1)$
0.03437	4.48811(0.00006)	$-9.510_9(0.006_3)$	$1.71_6(0.01_5)$	$-2.17_2(0.09_8)$
0.03634	4.48690(0.00006)	$-9.514_5(0.007_1)$	$1.73_0(0.01_7)$	$-2.2_7(0.1_1)$
0.04103	4.48374(0.00006)	$-9.503_3(0.006_6)$	$1.72_3(0.01_6)$	$-2.2_1(0.1_0)$
0.04697	$4.4797_7(0.0001_2)$	$-9.49_0(0.01_3)$	$1.72_4(0.03_2)$	$-2.2_5(0.2_1)$
		ala(gly)$_4$		
0.02476	4.49248(0.00005)	$-9.521_1(0.005_9)$	$1.70_6(0.01_4)$	$-2.11_3(0.09_1)$
0.02804	4.49007(0.00006)	$-9.511_5(0.006_7)$	$1.69_9(0.01_6)$	$-2.0_9(0.1_0)$
0.03087	4.48781(0.00009)	$-9.51_0(0.01_1)$	$1.71_7(0.02_5)$	$-2.2_1(0.1_6)$
0.03397	4.48544(0.00007)	$-9.497_9(0.007_6)$	$1.70_1(0.01_8)$	$-2.1_1(0.1_2)$
0.03663	$4.4835_5(0.0001_1)$	$-9.49_8(0.01_2)$	$1.71_1(0.02_8)$	$-2.1_7(0.1_8)$
0.03982	4.48117(0.00005)	$-9.507_4(0.005_6)$	$1.74_4(0.01_4)$	$-2.34_7(0.08_7)$

Table S4 Calculated densities for aqueous solutions of alanine and the ala(gly)$_n$ peptides at 298.15 K and pressures in the range 5.0 to 100.0 MPa

m/mol kg^{-1}	ρ^a/g cm^{-3}						
	p/MPa						
	5.0	10.0	20.0	40.0	60.0	80.0	100.0
				alanine			
0.04718	1.000589	1.002801	1.007156	1.015605	1.023723(5)	1.031533(9)	1.039056(16)
0.05996	1.000950	1.003160	1.007512	1.015953	1.024066(3)	1.031871(4)	1.039389(7)
0.08010	1.001518	1.003724	1.008069	1.016497	1.024596(5)	1.032389(8)	1.039897(15)
0.10013	1.002081	1.004284	1.008622	1.017038	1.025126(4)	1.032909(5)	1.040406(8)
0.12045	1.002651	1.004850	1.009181	1.017582	1.025658(4)	1.033428(7)	1.040914(13)
0.14028	1.003205	1.005401	1.009725	1.018114	1.026177(4)	1.033937(7)	1.041413(12)
0.16292	1.003835	1.006027	1.010343	1.018718	1.026767(4)	1.034514(5)	1.041978(9)
				alagly			
0.05333	1.001984	1.004192	1.008539	1.016972	1.025075(5)	1.032871(8)	1.040380(14)
0.07135	1.002900	1.005103	1.009442	1.017858	1.025947(5)	1.033729(10)	1.041225(17)
0.08857	1.003771	1.005970	1.010301	1.018702	1.026776(4)	1.034546(7)	1.042030(12)

0.10709	1.004703	1.006898	1.011220	1.019605	1.027664(4)	1.035419(5)	1.042890(8)
0.12555	1.005626	1.007817	1.012131	1.020499	1.028543(3)	1.036284(5)	1.043743(7)
0.14389	1.006540	1.008726	1.013032	1.021385	1.029414(3)	1.037141(4)	1.044587(7)
				ala$(gly)_2$			
0.05330	1.003100	1.005305	1.009647	1.018070	1.026164(3)	1.033952(5)	1.041453(7)
0.06806	1.004157	1.006357	1.010691	1.019099	1.027178(4)	1.034952(6)	1.042440(11)
0.08763	1.005547	1.007742	1.012066	1.020452	1.028512(5)	1.036268(8)	1.043739(14)
0.10530	1.006797	1.008988	1.013301	1.021669	1.029711(4)	1.037451(7)	1.044907(13)
0.12214	1.007980	1.010166	1.014470	1.022821	1.030847(4)	1.038571(6)	1.046013(10)
0.14172	1.009349	1.011529	1.015823	1.024153	1.032160(3)	1.039867(4)	1.047292(6)
0.15648	1.010375	1.012551	1.016837	1.025153	1.033147(4)	1.040840(6)	1.048253(11)
				ala$(gly)_3$			
0.02330	1.001411	1.003624	1.007982	1.016433	1.024554(4)	1.032367(5)	1.039891(8)
0.02673	1.001727	1.003939	1.008295	1.016742	1.024859(5)	1.032667(8)	1.040188(14)
0.03064	1.002088	1.004299	1.008651	1.017094	1.025206(5)	1.033011(8)	1.040527(14)
0.03437	1.002431	1.004640	1.008990	1.017428	1.025536(3)	1.033337(5)	1.040849(7)

0.03634	1.002611	1.004820	1.009169	1.017605	1.025710(4)	1.033508(5)	1.041019(8)
0.04103	1.003042	1.005249	1.009595	1.018025	1.026125(4)	1.033918(5)	1.041424(7)
0.04697	1.003583	1.005789	1.010131	1.018553	1.026647(5)	1.034434(8)	1.041934(14)
				ala(gly)$_4$			
0.02476	1.002064	1.004275	1.008630	1.017076	1.025191(3)	1.032998(4)	1.040517(7)
0.02804	1.002433	1.004643	1.008995	1.017437	1.025548(4)	1.033351(5)	1.040866(8)
0.03087	1.002752	1.004961	1.009311	1.017748	1.025856(4)	1.033655(7)	1.041167(11)
0.03397	1.003100	1.005308	1.009655	1.018089	1.026192(4)	1.033988(5)	1.041496(8)
0.03663	1.003398	1.005606	1.009951	1.018381	1.026481(4)	1.034273(7)	1.041779(12)
0.03982	1.003755	1.005961	1.010305	1.018730	1.026825(3)	1.034613(4)	1.042115(6)

[a] The estimated uncertainty of ρ for p = 5.0 to 40.0 MPa is 3×10^{-6} g cm^{-3}. For p = 60.0 to 100.0 MPa, each number in parentheses is the uncertainty in the last digit, or last two digits, of ρ.

Table S5 Apparent molar volumes of alanine and the ala(gly)$_n$ peptides in aqueous solution at 298.15 K and pressures in the range 0.1 to 100.0 MPa

m/mol kg^{-1}	V_ϕ^a/cm^3 mol^{-1}							
	p/MPa							
	0.1	5.0	10.0	20.0	40.0	60.0	80.0	100.0
				alanine				
0.04718	60.49(6)	60.55(6)	60.64(6)	60.84(6)	61.22(6)	61.57(10)	61.86(18)	62.04(32)
0.05996	60.50(5)	60.57(5)	60.67(5)	60.84(5)	61.21(5)	61.51(5)	61.76(6)	61.92(11)
0.08010	60.51(4)	60.60(4)	60.70(4)	60.88(4)	61.25(4)	61.57(6)	61.82(9)	61.99(17)
0.10013	60.53(3)	60.62(3)	60.72(3)	60.90(3)	61.25(3)	61.56(4)	61.80(5)	61.99(7)
0.12045	60.54(3)	60.63(3)	60.73(3)	60.92(3)	61.29(2)	61.59(3)	61.85(6)	62.04(10)
0.14028	60.55(2)	60.64(2)	60.74(2)	60.93(2)	61.29(2)	61.60(3)	61.85(5)	62.05(8)
0.16292	60.57(2)	60.66(2)	60.76(2)	60.96(2)	61.31(2)	61.62(2)	61.87(3)	62.07(5)
				alagly				
0.05333	94.45(6)	94.57(6)	94.70(6)	94.95(6)	95.45(5)	95.90(9)	96.25(14)	96.52(24)
0.07135	94.49(4)	94.61(4)	94.75(4)	95.00(4)	95.50(4)	95.94(7)	96.29(13)	96.56(22)

0.08857	94.53(3)	94.65(3)	94.79(3)	95.05(3)	95.54(3)	95.98(4)	96.33(7)	96.61(13)
0.10709	94.58(3)	94.70(3)	94.84(3)	95.10(3)	95.59(3)	96.01(4)	96.37(4)	96.64(7)
0.12555	94.62(2)	94.75(2)	94.89(2)	95.15(2)	95.64(2)	96.06(2)	96.41(4)	96.69(5)
0.14389	94.67(2)	94.79(2)	94.93(2)	95.19(2)	95.67(2)	96.09(2)	96.44(3)	96.72(5)
				$ala(gly)_2$				
0.05330	130.28(6)	130.41(6)	130.56(6)	130.85(6)	131.40(6)	131.89(5)	132.28(9)	132.57(12)
0.06806	130.32(4)	130.43(4)	130.60(4)	130.88(4)	131.42(4)	131.90(6)	132.29(8)	132.59(15)
0.08763	130.36(3)	130.50(3)	130.66(3)	130.94(3)	131.49(3)	131.96(5)	132.34(9)	132.64(15)
0.10530	130.40(3)	130.54(3)	130.69(3)	130.98(3)	131.52(3)	131.99(4)	132.37(6)	132.67(11)
0.12214	130.44(2)	130.58(2)	130.74(2)	131.02(2)	131.55(2)	132.02(3)	132.40(5)	132.70(8)
0.14172	130.48(2)	130.63(2)	130.78(2)	131.06(2)	131.60(2)	132.05(2)	132.43(3)	132.73(4)
0.15648	130.52(2)	130.67(2)	130.82(2)	131.10(2)	131.62(2)	132.07(3)	132.44(4)	132.74(7)
				$ala(gly)_3$				
0.02330	166.84(13)	166.97(13)	167.11(13)	167.34(13)	167.95(13)	168.46(16)	168.84(20)	169.10(32)
0.02673	166.88(11)	167.03(11)	167.16(11)	167.39(11)	167.99(11)	168.49(18)	168.92(28)	169.16(49)
0.03064	166.91(10)	167.03(10)	167.16(10)	167.45(10)	168.01(10)	168.53(16)	168.91(25)	169.20(43)

0.03437	166.95(9)	167.07(9)	167.23(9)	167.50(9)	168.08(8)	168.58(8)	168.96(14)	169.26(19)
0.03634	166.97(8)	167.11(8)	167.25(8)	167.52(8)	168.08(8)	168.60(10)	169.01(13)	169.28(21)
0.04103	167.01(7)	167.14(7)	167.29(7)	167.57(7)	168.13(7)	168.63(9)	169.03(12)	169.31(16)
0.04697	167.07(6)	167.22(6)	167.35(6)	167.64(6)	168.21(6)	168.69(10)	169.08(16)	169.36(28)
				ala(gly)$_4$				
0.02476	202.88(12)	202.95(12)	203.12(12)	203.37(12)	203.97(12)	204.52(12)	204.94(15)	205.21(26)
0.02804	202.92(11)	203.01(11)	203.17(11)	203.45(11)	204.03(10)	204.56(14)	204.98(17)	205.26(27)
0.03087	202.95(10)	203.05(10)	203.21(10)	203.49(10)	204.11(10)	204.61(12)	205.04(21)	205.32(33)
0.03397	202.98(9)	203.10(9)	203.25(9)	203.56(9)	204.13(9)	204.66(11)	205.07(14)	205.36(22)
0.03663	203.02(8)	203.15(8)	203.28(8)	203.59(8)	204.17(8)	204.68(10)	205.10(18)	205.37(31)
0.03982	203.05(8)	203.19(8)	203.35(8)	203.63(7)	204.22(7)	204.75(7)	205.17(10)	205.45(14)

[a] Each number in parentheses is the uncertainty in the last digit, or last two digits, of V_ϕ.

Table S6 Apparent molar isentropic compressions of alanine and the ala(gly)$_n$ peptides in aqueous solution at 298.15 K and pressures in the range 0.1 to 100.0 MPa

m/mol kg^{-1}	$-10^{15}K_{S,\phi}{}^{a}$/m^3 mol^{-1} Pa^{-1}							
	p/MPa							
	0.1	5.0	10.0	20.0	40.0	60.0	80.0	100.0
	alanine							
0.04718	$24.9_1(0.3_8)$	$25.0_1(0.3_7)$	$24.2_8(0.3_7)$	$22.7_9(0.3_5)$	$19.3_9(0.3_2)$	$16.1_4(0.3_0)$	$13.7_6(0.2_9)$	$11.1_6(0.3_0)$
0.05996	$24.8_7(0.3_0)$	$24.3_2(0.2_9)$	$23.4_5(0.2_9)$	$21.7_7(0.2_8)$	$18.6_2(0.2_5)$	$15.6_0(0.2_4)$	$13.1_1(0.2_2)$	$10.9_4(0.2_1)$
0.08010	$24.7_5(0.2_2)$	$23.9_2(0.2_2)$	$23.1_0(0.2_2)$	$21.3_0(0.2_0)$	$18.3_3(0.1_9)$	$15.3_1(0.1_8)$	$12.7_2(0.1_7)$	$10.7_6(0.1_7)$
0.10013	$24.6_7(0.18)$	$23.7_4(0.1_8)$	$22.7_4(0.1_7)$	$20.9_9(0.1_6)$	$17.9_2(0.1_5)$	$14.9_8(0.1_4)$	$12.4_8(0.1_3)$	$10.4_3(0.1_3)$
0.12045	$24.5_7(0.1_5)$	$23.9_0(0.1_5)$	$23.0_8(0.1_4)$	$21.3_3(0.1_4)$	$18.2_1(0.1_3)$	$15.2_6(0.1_2)$	$12.9_7(0.1_1)$	$10.7_7(0.1_1)$
0.14028	$24.4_8(0.1_3)$	$23.7_5(0.1_2)$	$22.8_3(0.1_2)$	$21.2_2(0.1_2)$	$18.2_6(0.1_1)$	$15.2_1(0.1_0)$	$12.7_9(0.1_0)$	$10.7_2(0.0_9)$
0.16292	$24.3_8(0.1_1)$	$23.6_4(0.1_1)$	$22.7_8(0.1_1)$	$21.1_2(0.1_0)$	$18.0_5(0.0_9)$	$15.2_7(0.0_9)$	$12.8_8(0.0_8)$	$10.7_2(0.0_8)$
	alagly							
0.05333	$33.6_7(0.3_4)$	$33.5_1(0.3_3)$	$32.0_5(0.3_2)$	$30.0_2(0.3_1)$	$25.7_1(0.2_9)$	$22.0_8(0.2_7)$	$18.5_4(0.2_5)$	$15.5_2(0.2_6)$
0.07135	$33.5_0(0.2_5)$	$33.03(0.2_5)$	$31.9_3(0.2_4)$	$29.9_4(0.2_3)$	$25.6_4(0.2_1)$	$21.8_7(0.2_0)$	$18.6_4(0.1_9)$	$15.3_7(0.1_9)$
0.08857	$33.3_4(0.2_0)$	$32.58(0.2_0)$	$31.64(0.1_9)$	$29.53(0.1_9)$	$25.52(0.1_7)$	$21.64(0.1_6)$	$18.45(0.1_5)$	$15.45(0.1_5)$

0.10709	$33.1_7(0.1_7)$	$32.3_6(0.1_6)$	$31.1_9(0.1_6)$	$29.0_4(0.1_5)$	$25.2_6(0.1_4)$	$21.5_8(0.1_3)$	$18.3_1(0.1_2)$	$15.2_8(0.1_2)$
0.12555	$32.9_9(0.1_4)$	$32.1_6(0.1_4)$	$31.1_1(0.1_4)$	$29.1_0(0.1_3)$	$25.1_7(0.1_2)$	$21.5_8(0.1_1)$	$18.1_1(0.1_0)$	$15.1_8(0.1_0)$
0.14389	$32.8_1(0.1_2)$	$31.9_8(0.1_2)$	$30.8_8(0.1_2)$	$28.8_5(0.1_1)$	$25.0_1(0.1_0)$	$21.3_1(0.1_0)$	$17.9_8(0.0_9)$	$15.1_0(0.0_9)$
				ala$(gly)_2$				
0.05330	$38.3_0(0.3_4)$	$37.4_7(0.3_3)$	$36.4_7(0.3_2)$	$33.6_2(0.3_1)$	$29.2_0(0.2_9)$	$24.7_9(0.2_6)$	$20.8_0(0.2_5)$	$17.4_3(0.2_3)$
0.06806	$38.0_9(0.2_6)$	$37.2_0(0.2_6)$	$36.1_7(0.2_5)$	$33.2_5(0.2_4)$	$28.9_8(0.2_2)$	$24.7_1(0.2_1)$	$20.7_1(0.2_0)$	$17.5_7(0.1_9)$
0.08763	$37.8_0(0.2_0)$	$37.0_8(0.2_0)$	$35.5_6(0.2_0)$	$32.9_9(0.1_9)$	$28.7_0(0.1_7)$	$24.3_9(0.1_6)$	$20.7_0(0.1_5)$	$17.36(0.1_6)$
0.10530	$37.5_7(0.1_7)$	$36.5_3(0.1_7)$	$35.3_4(0.1_6)$	$33.1_2(0.1_6)$	$28.4_9(0.1_4)$	$24.1_8(0.1_3)$	$20.4_8(0.1_3)$	$17.0_2(0.1_3)$
0.12214	$37.3_3(0.1_5)$	$36.1_5(0.1_4)$	$34.9_8(0.1_4)$	$32.7_6(0.1_3)$	$28.2_3(0.1_2)$	$24.0_9(0.1_2)$	$20.3_4(0.1_1)$	$16.9_4(0.1_0)$
0.14172	$37.0_6(0.1_3)$	$36.0_1(0.1_2)$	$34.7_6(0.1_2)$	$32.5_1(0.1_2)$	$28.0_9(0.1_1)$	$23.9_6(0.1_0)$	$20.1_5(0.0_9)$	$16.8_5(0.0_9)$
0.15648	$36.8_5(0.1_1)$	$35.5_3(0.1_1)$	$34.3_6(0.1_1)$	$32.0_9(0.1_0)$	$27.7_3(0.1_0)$	$23.7_1(0.0_9)$	$20.0_1(0.0_8)$	$16.7_3(0.0_8)$
				ala$(gly)_3$				
0.02330	$41.0_4(0.7_7)$	$39.9_6(0.7_6)$	$39.0_9(0.7_4)$	$36.9_2(0.7_1)$	$31.5_1(0.6_6)$	$26.2_6(0.6_1)$	$21.8_6(0.5_7)$	$18.2_3(0.5_4)$
0.02673	$40.9_4(0.6_7)$	$39.1_7(0.6_6)$	$37.9_8(0.6_5)$	$36.5_0(0.6_2)$	$31.2_8(0.5_7)$	$26.5_6(0.5_3)$	$22.2_9(0.5_1)$	$18.7_2(0.5_1)$
0.03064	$40.8_4(0.5_9)$	$39.0_1(0.5_8)$	$38.5_8(0.5_6)$	$36.6_0(0.5_4)$	$31.1_9(0.5_0)$	$26.3_5(0.4_7)$	$21.8_9(0.4_4)$	$18.3_7(0.4_4)$
0.03437	$40.7_3(0.5_2)$	$39.9_2(0.5_1)$	$38.4_9(0.5_0)$	$35.6_8(0.4_8)$	$31.0_2(0.4_4)$	$26.6_5(0.4_1)$	$21.8_0(0.3_8)$	$18.2_6(0.3_6)$

0.03634	$40.6_9(0.5_0)$	$39.1_7(0.4_9)$	$38.4_2(0.4_7)$	$35.6_0(0.4_6)$	$31.1_7(0.4_2)$	$26.3_6(0.3_9)$	$21.9_1(0.3_6)$	$18.4_1(0.3_5)$
0.04103	$40.5_3(0.4_4)$	$39.1_6(0.4_3)$	$38.1_2(0.4_2)$	$35.5_2(0.4_0)$	$30.8_6(0.3_7)$	$26.4_3(0.3_4)$	$21.7_4(0.3_2)$	$18.1_6(0.3_0)$
0.04697	$40.3_6(0.3_8)$	$39.1_2(0.3_8)$	$37.5_7(0.3_7)$	$35.6_8(0.3_5)$	$30.4_2(0.3_2)$	$25.8_7(0.3_0)$	$21.7_2(0.2_9)$	$18.0_3(0.2_9)$
				ala$(gly)_4$				
0.02476	$43.9_6(0.7_3)$	$42.8_7(0.7_1)$	$41.1_6(0.7_0)$	$38.3_8(0.6_7)$	$33.5_3(0.6_2)$	$28.0_8(0.5_7)$	$23.6_3(0.5_3)$	$19.4_3(0.5_0)$
0.02804	$43.8_8(0.6_4)$	$42.0_1(0.6_3)$	$41.0_7(0.6_2)$	$38.0_2(0.5_9)$	$33.0_0(0.5_4)$	$27.9_8(0.5_1)$	$23.3_8(0.4_7)$	$19.5_6(0.4_5)$
0.03087	$43.8_0(0.5_8)$	$42.8_6(0.5_7)$	$41.3_4(0.5_6)$	$39.4_0(0.5_4)$	$32.9_6(0.4_9)$	$27.7_7(0.4_6)$	$23.6_7(0.4_3)$	$19.5_1(0.4_2)$
0.03397	$43.7_3(0.5_3)$	$43.0_7(0.5_2)$	$41.2_3(0.5_1)$	$38.8_5(0.4_9)$	$33.0_1(0.4_5)$	$27.9_7(0.4_2)$	$23.6_4(0.3_9)$	$19.5_4(0.3_7)$
0.03663	$43.6_7(0.4_9)$	$42.4_5(0.4_8)$	$40.6_5(0.4_7)$	$38.6_9(0.4_5)$	$33.0_2(0.4_2)$	$27.7_4(0.3_9)$	$23.6_6(0.3_7)$	$19.5_8(0.3_6)$
0.03982	$43.5_8(0.4_5)$	$42.2_8(0.4_4)$	$41.2_9(0.4_3)$	$38.7_4(0.4_2)$	$33.2_2(0.3_8)$	$28.3_5(0.3_5)$	$23.4_1(0.3_3)$	$19.5_7(0.3_1)$

[a] Estimated uncertainties are in parentheses.

Table S7 Apparent molar isothermal compressions for alanine and the ala(gly)$_n$ peptides in aqueous solution at 298.15 K and pressures in the range 0.1 to 100.0 MPa

m/mol kg^{-1}	$10^{15}K_{T,\phi}$/m^3 mol^{-1} Pa^{-1}							
	p/MPa							
	0.1	5.0	10.0	20.0	40.0	60.0	80.0	100.0
	alanine							
0.04718	−22.82	−21.98	−21.29	−19.30	−17.63	−14.49	−12.22	−9.70
0.05996	−22.79							
0.08010	−22.71	−21.92	−21.14	−19.41	−16.89	−13.67	−11.18	−9.42
0.10013	−22.64	−21.76	−20.82	−19.12	−16.18	−13.36	−10.95	−9.19
0.12045	−22.56	−21.94	−21.15	−19.48	−16.49	−13.66	−11.47	−9.35
0.14028	−22.48	−21.79	−20.91	−19.38	−16.55	−13.61	−11.29	−9.30
0.16292	−22.39	−21.70	−20.87	−19.29	−16.34	−13.68	−11.39	−9.31
	alagly							
0.05333	−30.52	−30.44	−29.03	−27.12	−23.03	−19.58	−16.20	−13.30
0.07135	−30.40	−30.00	−28.96	−27.09	−23.00	−19.41	−16.33	−13.19

0.08857	−30.27	−29.58	−28.70	−26.70	−22.91	−19.20	−16.16	−13.28
0.10709	−30.13	−29.39	−28.28	−26.24	−22.66	−19.17	−16.05	−13.14
0.12555	−29.98	−29.22	−28.23	−26.33	−22.60	−19.19	−15.86	−13.05
0.14389	−29.82	−29.05	−28.01	−26.09	−22.45	−18.93	−15.74	−12.98
				ala(gly)$_2$				
0.05330	−33.92	−33.18	−32.26	−29.57	−25.43	−21.27	−17.49	−14.30
0.06806	−33.77	−32.97	−32.01	−29.25	−25.26	−21.24	−17.43	−14.48
0.08763	−33.50	−32.86	−31.42	−29.00	−25.00	−20.93	−17.45	−14.28
0.10530	−33.26	−32.31	−31.20	−29.13	−24.77	−20.70	−17.21	−13.93
0.12214	−33.06	−31.96	−30.87	−28.80	−24.54	−20.68	−17.23	−14.19
0.14172	−32.78	−31.81	−30.65	−28.54	−24.40	−20.50	−16.90	−13.78
0.15648	−32.59	−31.35	−30.25	−28.13	−24.05	−20.27	−16.77	−13.66
				ala(gly)$_3$				
0.02330	−34.82	−33.85	−33.09	−31.15	−26.12	−21.20	−17.09	−13.72
0.02673	−34.75	−33.09	−32.01	−30.76	−25.92	−21.53	−17.55	−14.24
0.03064	−34.72	−32.99	−32.68	−30.91	−25.87	−21.35	−17.18	−13.91

0.03437	−34.66	−33.96	−32.64	−30.03	−25.77	−21.74	−17.17	−13.88
0.03634	−34.62	−33.23	−32.59	−29.97	−25.93	−21.45	−17.28	−14.03
0.04103	−34.53	−33.28	−32.34	−29.94	−25.66	−21.56	−17.14	−13.80
0.04697	−34.43	−33.29	−31.85	−30.17	−25.28	−21.06	−17.19	−13.74
				ala(gly)$_4$				
0.02476	−36.86	−35.91	−34.33	−31.78	−27.38	−22.30	−18.19	−14.28
0.02804	−36.76	−35.03	−34.21	−31.41	−26.82	−22.17	−18.06	−14.38
0.03087	−36.68	−35.88	−34.48	−32.16	−26.77	−21.95	−18.20	−14.33
0.03397	−36.59	−36.08	−34.36	−31.63	−26.82	−22.16	−18.17	−14.36
0.03663	−36.52	−35.44	−33.76	−31.72	−26.81	−21.90	−18.17	−14.38
0.03982	−36.40	−35.24	−34.38	−31.88	−26.99	−22.51	−17.90	−14.35