Figure ID	File name	File title
Graphical abstract	Data for Figs 1, 9.A and S5.txt	Specific viscosity as a function of Na CMC concentration
	Data for Figs 9.A, S19 and S20.txt	Na CMC concentration dependence of the slow mode relaxation time at different scattering angles and of the power law exponent from the fit that describes its dependence on
Fig 1	Data for Figs 1, 9.A and S5.txt	Specific viscosity as a function of Na CMC concentration
Fig 2	Data for Fig 2.txt	Normalised intensity auto-correlation data of a 0.018 wt% Na CMC solution at 90 degree scattering angle illustrating different purification methods
Fig 3	Data for Figs 3, S18.B and S18.C.txt	Na CMC concentration dependence of the contribution of the slow relaxation mode to the excess Rayleigh ratio and of the power law exponent describing its q dependence
	Data for Figs 3.A and S11.A.txt	Excess Rayleigh ratio as a function of the scattering vector for all the investigated Na CMC concentration
	Data for Figs 3.B and S11.B.txt	Power law exponents from the fits of the excess Rayleigh scattering vs scattering vector data for both SLS and DLS measurements
Fig 4	Data for Fig 4.txt	Concentration dependence of the excess Rayleigh ratio at different scattering angles
Fig 5	Data for Figs 5.A and B.txt	Normalised intensity auto-correlation data as a function of the scattering angle for 2 Na CMC solutions (0.073 wt% and 0.37 wt%)
	Data for Figs 5.B and S15.txt	Normalised intensity auto-correlation data as a function of the scattering angle and Na CMC concentration
Fig 6	Data for Fig 6.txt	Concentration dependence of the relaxation time associated with the fast mode
Fig 7	Data for Fig 7.txt	Concentration dependence of the diffusion coefficient asociated with the fast relaxation mode
Fig 8	Data for Fig 8.txt	Concentration dependence of the relaxation time and the stretching coefficient associated with the slow relaxation mode
Fig 9	Data for Figs 1, 9.A and S5.txt	Specific viscosity as a function of Na CMC concentration
	Data for Figs 9.A, S19 and S20.txt	Na CMC concentration dependence of the slow mode relaxation time at different scattering angles and of the power law exponent from the fit that describes its dependence on q
	Data for Figs 9.B, 9.C and S23.txt	Concentration dependence of the diffusion coefficient asociated with the slow relaxation mode
Fig S4	Data for Fig S4.txt	Viscosity curves
Fig S5	Data for Figs 1, 9.A and S5.txt	Specific viscosity as a function of Na CMC concentration
Fig S6	Data for Fig S6.A.txt	Normalised intensity auto-correlation data collected at 30 degree scattering angle for measurements over different periods of time for a 0.073 wt% Na CMC solution
	Data for Fig S6.B.txt	Normalised intensity auto-correlation data collected at 90 degree scattering angle for measurements over different periods of time for a 0.073 wt% Na CMC solution
	Data for Fig S6.C.txt	Normalised intensity auto-correlation data collected at 135 degree scattering angle for measurements over different periods of time for a 0.073 wt% Na CMC solution
	Data for Fig S6.D.txt	Normalised scattering intensity as a function of the scattering angle and the measurement duration for a 0.073 wt% Na CMC solution
Fig S7	Data for Fig S7.txt	Scattering intensity as a function of time for a 0.073 wt% Na CMC solution at 30 degree scattering angle and for measurements lasting 10 min
Fig S8	Data for Fig S8.A1.txt	Normalised intensity auto-correlation data collected for a 0.073 wt% Na CMC solution at 130 degree scattering angle
	Data for Fig S8.A2.txt	Averaged intensity auto-correlation data at 130 degree scattering angle for a 0.073 wt% Na CMC solution and fit of the data
	Data for Figs S8.B1 and B2.txt	Normalised intensity auto-correlation data collected for a 0.37 wt% Na CMC solution at 90 degree scattering angle and fit
	Data for Figs S8.C1, C2 and C3.txt	Nornalised intensity auto-correlation data collected for a 0.55 wt% Na CMC solution at 130 degree scattering angle and fit
Fig S10	Data for Fig S10.txt	Residuals of the fits shown in Fig S9
Fig S11	Data for Figs 3.A and S11.A.txt	Excess Rayleigh ratio as a function of the scattering vector for all the investigated Na CMC concentration
	Data for Figs 3.B and S11.B.txt	Power law exponents from the fits of the excess Rayleigh scattering vs scattering vector data for both SLS and DLS measurements
Fig S12	Data for Fig S12.txt	Refractive index as a function of Na CMC concentration
Fig S13	Data for Fig S13.txt	Different representations of the SLS data for the 0.046 wt% Na CMC solution
Fig S14	Data for Fig S14.txt	Dependence of the ratio between the relative amplitudes of the slow and the fast relaxation modes as a function of the scattering vector and of Na CMC concentration
Fig S15	Data for Figs 5.B and S15.txt	Normalised intensity auto-correlation data as a function of the scattering angle and Na CMC concentration
Fig S16	Data for Fig S16.B.txt	Contribution of the fast relaxation mode to the excess Rayleigh ratio as measured at different scattering angles as a function of Na CMC concentration
	Data for Figs 16.A and C.txt	Contribution of the fast relaxation mode to the excess Rayleigh ratio as a function of Na CMC concentration and of the scattering vector
Fig S17	Data for Fig S17.txt	Illustration of the calculation of the diffusion coefficient associated with the fast relaxation mode

Fig S18	Data for Figs S18.A and D.txt	Contribution of the slow relaxation mode to the excess Rayleigh ratio as a function of Na CMC concentration and of the scattering vector
	Data for Figs 3, S18.B and S18.C.txt	Na CMC concentration dependence of the contribution of the slow relaxation mode to the excess Rayleigh ratio and of the power law exponent describing its q dependence
Fig S19	Data for Figs 9.A, S19 and S20.txt	Na CMC concentration dependence of the slow mode relaxation time at different scattering angles and of the power law exponent from the fit that describes its dependence on q
Fig S20	Data for Figs 9.A, S19 and S20.txt	Na CMC concentration dependence of the slow mode relaxation time at different scattering angles and of the power law exponent from the fit that describes its dependence on q
Fig S21	Data for Fig S21.txt	Illustration of the calculation of the diffusion coefficient associated with the slow relaxation mode for the 0.046 wt% Na CMC solution
Fig S22	Data for Fig S22.txt	Illustration of the calculation of the diffusion coefficient associated with the slow relaxation mode for the 0.18 wt% Na CMC solution
Fig S23	Data for Figs 9.B, 9.C and S23.txt	Concentration dependence of the diffusion coefficient asociated with the slow relaxation mode
Fig S24	Data for Fig S24.txt	Concentration dependence of the apparent hydrodynamic and the apparent radius of gyration