REPORT SC 4729 Interaction of Agmatine-Containing Poly(Amidoamine) Polymer AGMA1 with mucus models

AGMA1 is an amphoteric, polyamidoamine, proved to be effective as infection inhibitor for some viruses such as human papilloma virus HPV-16 and herpes simplex virus HSV-2. In order to better understand its function of protection against viruses, we firstly focused on interaction of this polymers with mucus, constituting the first barrier. We employ porcine gastric mucins (PGM type II and III, Sigma Aldrich) as model system.

We report examples of data obtained at different sample to detector distance.

AGMA1 structure in solution. Investigations were carried in PBS buffer at pH 6.8 at different concentrations. As an example we report the low molecular formulation of AGMA1 polymer at different concentration and analysis by Gaussian colis function **Figure 1**.

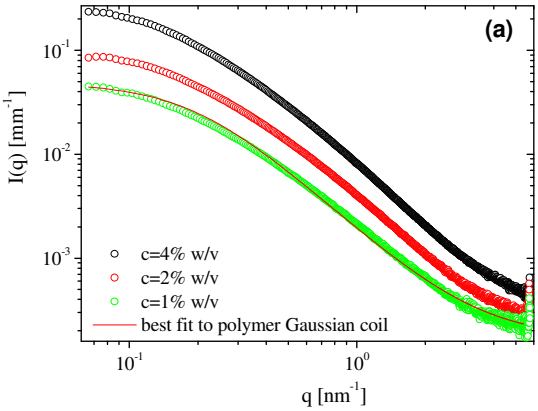

Figure 1: SAXS scattering profiles for AGMA1 at different concentrations

AGMA1 complexation with the two types of porcine gastric mucins, at different ratio and different pH were studied. As ann example we report AGMA1/PGM-III complex SAXS spectra **Figure 2**.

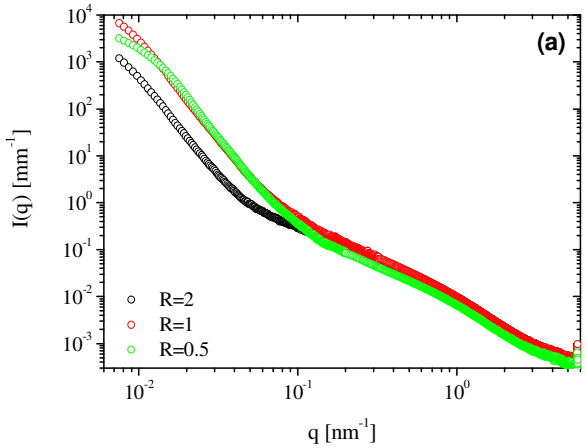

Figure 3: SAXS scattering profiles for AGMA1/PGM-III complexes at different ratios *R* (*R*=[AGMA]/[PGM-III])