

UMAX) and data processing was done on Macintosh work stations with the programs NIH Image⁴¹ and Adobe Photo Shop.

Fig. 2: Comparison of the network of polymers at room temperatures and after a 3 h exposures to 75 °C (insert). In both heat treated and control samples bundles of polymers were present, consisting of double rings primarily stacked end to end (side views) and with some rings (end views) also visible.

Method: Rosettasome samples at 2 mg/ml were polymerized at room temperature in HKM buffer and exposed to 75 °C for 0, 1, 2, and 3 h in a programmable heating block (Hybaid, OmniGene). Samples removed from the heating block were immediately processed for TEM as described (Fig 1).

Fig. 3: Abundance of rosettasome in *S. shibatae* cells. The Coomassie-stained protein bands from 1.0 to 2.6 µg of rosettasome (Pure protein), total proteins from 1 to 4 x 10⁸ cells (Cell extracts), and from a molecular mass standard (kDa) on a denaturing (SDS) polyacrylamide gel. The plot of the stained bands (area x intensity) vs known amounts of pure protein was used to calculate the amount of rosettasome in cells (insert).

Method: The concentration of *S. shibatae* cells in an actively growing culture was determined by direct counts on a haemocytometer (Neubauer). Volumes containing specific numbers of cells centrifuged at 10,000 RPM room temp. for 3 min (Hermle microfuge) and cell pellets were lysed by the addition of SDS-buffer (final conc. 10% glycerol, 5% β-mercaptoethanol, 3% SDS, 65 mM Tris-HCl pH 6.8, 0.001% bromophenol blue). Extracts from different numbers of cells and samples containing varying amounts of pure rosettasome (see caption Fig. 1) were applied to a 10% denaturing polyacrylamide gel and proteins were separated by electrophoresis. After staining with Coomassie brilliant blue (R280), gels were scanned (Powerlook Pro scanner, UMAX) and the digitized areas and intensities of stain associated with rosettasome bands was determined. The linear plot derived from varying amounts of pure proteins was used to estimate the absolute amount of rosettasome in