ESRF	**Experiment title:** Bacterial and viral neuraminidases/sialidases	**Experiment number**: LS-2087
Beamline: ID14-2	**Date of experiment**: from: 03/02/02 to: 04/02/02	**Date of report**:
Shifts: 3	**Local contact(s)**: Antoine Royant	*Received at ESRF:*

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Report:

1. Hemagglutinin neuraminidase

Several datasets of substrate analogues. HN_FLUORO is a sialic acid with substitution of F at the 3-position protons. HN_SULFUR is a non-hydrolyesable disaccharide with a sulfur in place of the glycosidic oxygen.

Ident	Nframes	osc	reso	exp	dist (mm)	conditions	compl	Rm
1st xtal, orthorhombic 72.89 x 77.72 x 200.27 Å								
hn_fluoro	200	0.5	2.2 A	10sec	205	100 mM, pH 6.57, 3.5h	90.3%	6.03%
2nd xtal, orthorhombic 73.15 x 72.97 x 199.42 Å								
hn_fluoro2	145	0.5	2.2 A	10 sec	205	100 mM, 5.5hours		
hn_fluoro3	100	0.5	2.2 A	10 sec	205	100 mM, 5.5hours		
hn_sulfur *)	1-72	0.7	2.2 A	5sec	205	25 mM, pH 6.57, 6.5hours	94.8%	5.5%
hn_sulfur	86-120	0.7	2.2 A	5sec	205	" " "		

*) *orthorhombic 73.35 x 78.67 x 200.38 Å*

**) gap of 14 frames - due to refil at 6-30 am

2. Neuraminidase from *Vibrio Cholerae*

Following the success of the last visit in November, co-crystals were prepared with sialyl-lactose:

Ident	Nframes	osc	reso	exp	dist (mm)	conditions	compl	Rm
vc_sialyl	120	1.0	1.8	15sec	162	co-crystals with sialyl-lactose	94%	10%

3. Neuraminidase from *Clostridium perfringens*

Recently obtained crystals of a 55kDa fragment of the 77kDa sialidase from C. perfringens were tested for their high resolution limit. Data in-house extended to 1.6Å, and on ID14-2 data were observed to beyond 1.0Å! Unfortunately on the low resolution pass, the crystals were found to be split – but this trial gives us hope to return to obtain very high resolution data from this large protein.

Ident	Nframes	osc	reso	exp	dist (mm)	conditions	compl	Rm
nanH_G12	120	1.0	2.0	10 sec	184	native		
nanH_18	130	1.0	2.2	10sec	205	native		