EUROPEAN SYNCHROTRON RADIATION FACILITY

INSTALLATION EUROPEENNE DE RAYONNEMENT SYNCHROTRON

Experiment Report Form

The double page inside this form is to be filled in by all users or groups of users who have had access to beam time for measurements at the ESRF.

Once completed, the report should be submitted electronically to the User Office via the User Portal:

https://wwws.esrf.fr/misapps/SMISWebClient/protected/welcome.do

Reports supporting requests for additional beam time

Reports can be submitted independently of new proposals – it is necessary simply to indicate the number of the report(s) supporting a new proposal on the proposal form.

The Review Committees reserve the right to reject new proposals from groups who have not reported on the use of beam time allocated previously.

Reports on experiments relating to long term projects

Proposers awarded beam time for a long term project are required to submit an interim report at the end of each year, irrespective of the number of shifts of beam time they have used.

Published papers

All users must give proper credit to ESRF staff members and proper mention to ESRF facilities which were essential for the results described in any ensuing publication. Further, they are obliged to send to the Joint ESRF/ ILL library the complete reference and the abstract of all papers appearing in print, and resulting from the use of the ESRF.

Should you wish to make more general comments on the experiment, please note them on the User Evaluation Form, and send both the Report and the Evaluation Form to the User Office.

Deadlines for submission of Experimental Reports

- 1st March for experiments carried out up until June of the previous year;
- 1st September for experiments carried out up until January of the same year.

Instructions for preparing your Report

- fill in a separate form for each project or series of measurements.
- type your report, in English.
- include the reference number of the proposal to which the report refers.
- make sure that the text, tables and figures fit into the space available.
- if your work is published or is in press, you may prefer to paste in the abstract, and add full reference details. If the abstract is in a language other than English, please include an English translation.

ESRF	**Experiment title:** microdiffraction on vimentin intermediate filaments networks and bundles	**Experiment number**: SC-1091
Beamline: ID 13	**Date of experiment**: from: April 17th 2003 to: April 19th 2003	**Date of report**: May 9th 2017
Shifts: 6	**Local contact(s)**: Christian Riekel	*Received at ESRF:*

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Report:

We performed X-ray microdiffraction experiments on dense filamentous phases of vimentin and keratin K5/K14 intermediate filaments. The filaments were assembled from recombinant proteins using standard conditions in phosphate or Tris-HCl buffers and centrifuged to create dense liquid crystalline phases as observed by polarized light microscopy. The goal was to model the radial packing of vimentin or keratin tetramers within mature filaments using SAXS data. Unfortunately we were not able to obtain reliable SAXS from any of our samples due to their heterogeneity. However this series of experiments was the foundation of another SAXS study on vimentin assembly intermediates that was published in PNAS in 2006.

Sokolova, A. V., Kreplak, L., Svergun, D. I., Herrmann, H., Aebi, U. & Strelkov, S. V. (2006). Monitoring intermediate filament assembly with small-angle X-ray scattering: molecular architecture of assembly intermediates. *PNAS* 103: 16206-16211.