



## Spectrophotometer is selected as colorfastness measuring instrument

The Japan Synthetic Textile Inspection Institute studies judgment using measuring instruments.

### Background

At the Japan Synthetic Textile Inspection Institute, various tests, including tests of the characteristics of material for clothing, are conducted according to outside requests. This institute has established branches not only in Japan but also overseas, and contributes to the progress of quality within the industry through the introduction of the latest equipment. Additionally, the examination results are certified as coming from an impartial third party. Tests concerning the colorfastness (the strength of the dye) are conducted based on JIS (Japan Industrial Standards) for items such as fading, washing, and friction. In JIS, judgment is performed by visual evaluation at present but there are problems such as variations depending on the person. Therefore, this inspection institute has been considering prompt instrumentation of this operation.

[ The present judgment method ]



### Outline of the measurement process

The tests are performed by applying a stress, such as light, to a part of the cut cloth and judging the degree of its color change in comparison to a gray scale. In the actual tests, two test items in particular; fading and chlorine resistance, are under consideration, and for those items, an evaluation method which will provide results close to these of visual evaluation is being examined. In selecting a meter which is able to perform this evaluation, emphasis is placed on high accuracy of the absolute value and software for easy operation. At the same time, the support system is also an important point for proceeding with instrumentation. When the meters of several companies were compared, Minolta's Spectrophotometer was in the top class for absolute value accuracy, and it also has substantial software that includes many color systems, such as CMC. Moreover, the person in charge carefully answers any questions about operation and measurements, so the support system is also well established. For all of these reasons, the Minolta Spectrophotometer was selected. Additionally since the Spectrophotometer is a portable handheld spectrophotometer, various other applications are also being considered.

[ Measuring with Spectrophotometer ]



### Results

- The stable measurement performance of the Spectrophotometer enabled a smooth search for an examination method which would correspond to visual evaluation.
- In the future, it is possible that the range of applications will expand, utilizing the portability of the Spectrophotometer even more.