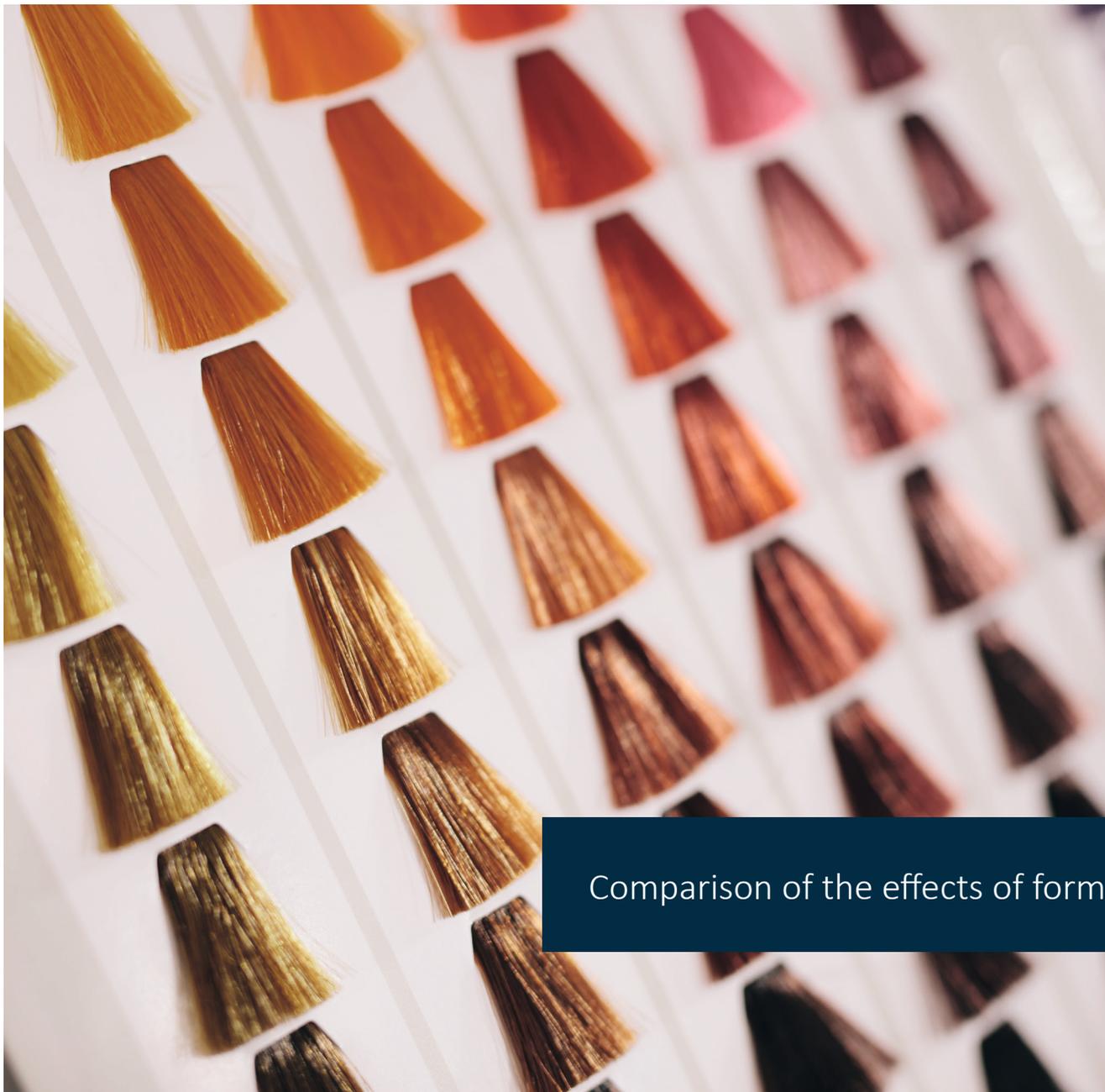


SUCCESS STORY



Henkel relies on Statistica for challenging analyses



Comparison of the effects of formulations

BACKGROUND

Henkel is one of the world's leading manufacturers of consumer goods. Beauty Care is an important business segment with brands such as Schwarzkopf, Schauma and Taft.

Henkel attaches great importance to statistical evaluation in research and development of new products, for example when it comes to investigating the effects of new care products. Analyses must be carefully carried out and documented here and must withstand critical statistical testing. Henkel has now built up a great deal of know-how in this area and regularly checks how methodological and statistical developments can be used for its own work

However, the required methods are often only found in special tools. In order to avoid isolated solutions, Henkel was looking for an integrated solution that would cover as many analysis scenarios as possible. The Statistica data analysis software has been used at Henkel for many years for various analyses, which is why it was obvious to expand this proven solution. Another argument in favour of Statistica was that Statistica Visual Basic allows additional functions and custom applications to be integrated into the existing user interface. Henkel therefore decided to map its special requirements in Statistica in cooperation with StatSoft.

TWO APPLICATION EXAMPLES

A common scenario at Henkel is to compare the effects of different formulations or products using variance analysis.

The associated data is not always distributed normally and can have special properties.



Figure (1)

MULTIPLE TESTING

One challenge, for example, lies in the fact that when comparing different formulations, extensive test series are often required (so-called multiple testing in post-hoc analyses). Such analyses require a special correction of significance expenditure in order not to make excessively optimistic or negative statements (i.e. not to test statistically too liberal or too conservative). The current methods place high demands on the data or are only suitable for a few, large samples.

With the support of StatSoft, Henkel has put in place an ultra-modern implementation of post-hoc analyses, which also ensures precise, statistically reliable results in many formulation comparisons.

This solution is tailored to Henkel's industry requirements and data situation and is also suitable for a small number of non-normally distributed measurement values

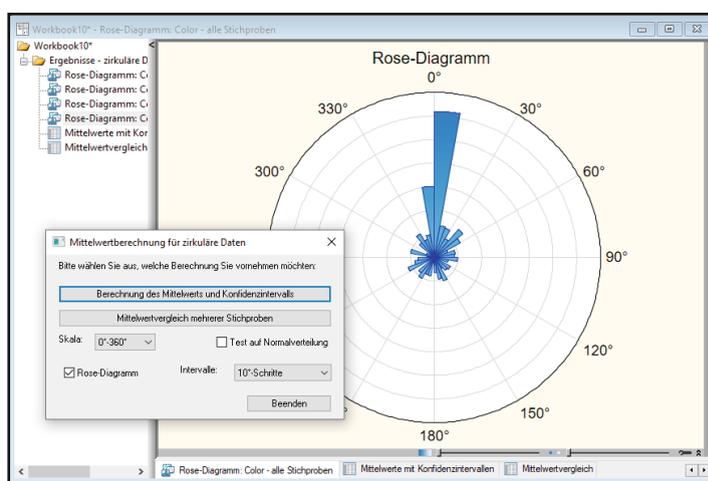


Figure (2)

CIRCULAR DATA

Special requirements also arise when comparing different hair colorations: Here the colour values can be represented by means of a circular scale, which illustrates the colour tones in a ring. The colours merge smoothly on this scale. Circularly displaying measured values means that actually very similar colour tones can assume numerical values that are far apart from each other. This quickly leads to paradoxical situations, such as when two similar red tones are much further apart in number (e.g. 10 deg. and 350 deg.) than one red and one blue tone (e.g. 350 deg. and 260 deg.). On such data statistical evaluations are not possible without further ado.

In cooperation with StatSoft, however, a solution was developed that allows Statistica to analyse such unusual data sets and to automatically apply the necessary transformations and algorithms.

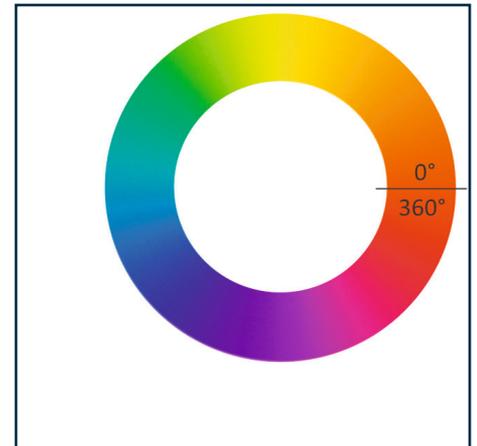


Figure (3)

RESULTS

The extensions and adaptations each required only a few days of implementation work. The results achieved in close exchange with StatSoft experts meet the highest standards in terms of statistical methodology and validity and even exceed some of the special tools on the market.

Henkel product developers move through familiar Statistica dialogues, which offer a high degree of automation and operator safety. This enables Henkel to use a wide variety of methods efficiently and reliably.



„The tailor-made Statistica solutions allow us to quickly and easily evaluate even difficult data sets with high selectivity, and have greatly improved productivity in our laboratories.“

Dr. Georg Knübel
R&D Beauty Care – Hair Biophysics, Henkel AG & Co. KGaA

ABOUT HENKEL

Henkel AG & Co. KGaA is internationally active in the three business segments Laundry & Home Care, Beauty Care and Adhesive Technologies. Founded in 1876, the company holds leading global market positions in consumer and industrial business with well-known brands such as Persil, Schwarzkopf and Loctite. The company is based in Düsseldorf, Germany. Over 80 percent of the approximately 47,000 employees work outside Germany. This makes Henkel one of the most internationally oriented companies in Germany.

More informationen: www.henkel.de

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