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# Into the blue

## Vibracolor® Moonlight Blue: A new opportunity for hair colorant manufacturers

**Abstract** With individualism on the rise, a change of hair color is the perfect way for many consumers to express themselves. For both men and women, a new shade is a great way to achieve a style change and get a whole new look. As a result, offering a wide variety of shades is essential for hair dye manufacturers to succeed. But it is often not easy to launch new colors, as hair dyes are among the most thoroughly assessed and heavily regulated consumer products in Europe. Now, harnessing its deep insight into consumer needs and its expertise in hair dye chemistry, BASF's Personal Care business has developed a new blue opportunity for hair colorants: Vibracolor® Moonlight Blue. This new hair dye offers formulators the opportunity to easily create a variety of blue shades – from brilliant, trendy blues to darker hues, including brown. In addition, the new direct dye stands out in terms of color intensity and brilliance, as well as low-use concentration.

### INTRODUCTION

Today's consumers are increasingly looking to make a statement with an individual style – and when it comes to personal expression, there is no better way than with their hair and, in particular, hair color. Dyeing is not only about covering up gray hair – it's about expressing individuality. Of course, the latest trends inspire hair colors just as much as they do fashion. Whether influenced by celebrities, fashion magazines or the catwalk – today's trends go beyond brunette, black and blond. Every conceivable shade is possible, and eye-catching colors like blue can be a real statement.

Hair dye manufacturers are always seeking to meet these trends and satisfy consumers' growing demand for products that do not limit their self-expression. But very often they are confronted with major challenges – as their products are among the most thoroughly assessed and heavily regulated ones not only in Europe. This often makes developing new hair dyes and formulating new colors and shades quite difficult – especially when it comes to blue hair dyes, where there are very limited market alternatives, as many of these ingredients used so far have raised regulatory and toxicological questions. Moreover, existing products often show room for improvement in terms of performance. In particular, this applies to color intensity and



brilliance, as well as light fastness and solution rate, making these dyes less easy to formulate.

BASF's Personal Care business supports hair dye manufacturers to create a broad range of products that meet consumers' functional and emotional needs by leveraging its key strengths of market empathy and scientific excellence. Its many years of research and development have now resulted in a new blue solution: Vibracolor® Moonlight Blue (INCI: Basic Blue 124) hair dye.

#### BRILLIANT SHADES, DISTINCTIVE LOOKS

Basic Blue 124 is a blue, cationic, direct dye that introduces a new spectrum of vibrant shades for hair coloring. Used on its own, it delivers a brilliant blue color, which can be adjusted to various levels of intensity – from very light to an intense dark blue, from natural tones to bolder, fashionable shades.

But Vibracolor® Moonlight Blue opens up even more color opportunities beyond blue hues – for example, for brown hair shades. Up until now, the formulation of natural brown shades for hair colorants has been particularly problematic due to the lack of an effective blue dye, which is essential when formulating dark shades. The limited range of existing products on the market was not always entirely suitable, for example, due to weak color performance and poor stability. In addition, regulatory restrictions on blue dyes posed a challenge to hair dye manufacturers: Some products are currently under regulatory discussion, while others have already been banned. BASF's Basic Blue 124 can fill this gap, offering manufacturers new opportunities to create new shades.

#### EXTREMELY FLEXIBLE AND LONG-LASTING

The new direct dye, which is delivered as a greenish-blue powder, can be used in a variety of products. For example, it can be applied to all types of semi-permanent hair coloring – the ideal

way for consumers to try out various hair colors and experiment. Semi-permanent applications containing Basic Blue 124 can range from common hair color creams to color-refreshing shampoos, conditioners and more.

In addition, the direct dye can be used in permanent dye formulations to give consumers an extra long-lasting color boost and brilliance.

As well as outstanding shades, customers' expectations of hair dye quality are higher than ever: They are demanding fashionable hair colors with intensive, brilliant color and a high tinctorial strength at low dosages. Outstanding color stability and wash fastness are also important to a consumer's choice of hair dye. And hair dyes containing Vibracolor® Moonlight Blue offer these properties. Especially when combined with other Vibracolor® dyes, it ensures high-quality, uniform wash fastness for the complete shade, without an undesired color shift.

From a formulation perspective, only low levels of Vibracolor® Moonlight Blue are required to obtain the desired color results – with the incorporation level between 0.01% and 0.5%. In addition, Basic Blue 124 is very easy to formulate and is characterized by a high degree of solubility in aqueous systems. Under acidic conditions, this blue hair dye demonstrates proven stability. Whereas stability under alkaline conditions represents a challenge for the majority of blue dye ingredients currently on the market, with Vibracolor® Moonlight Blue, BASF has developed a solution that can also be used for hair coloring applications under alkaline conditions. However, individual tests are recommended both for immediate application under alkaline conditions, as well as for use in combination with hydrogen peroxide. In terms of coloring result, the pH conditions of immediate application in acidic and alkaline conditions do not show any significant differences.

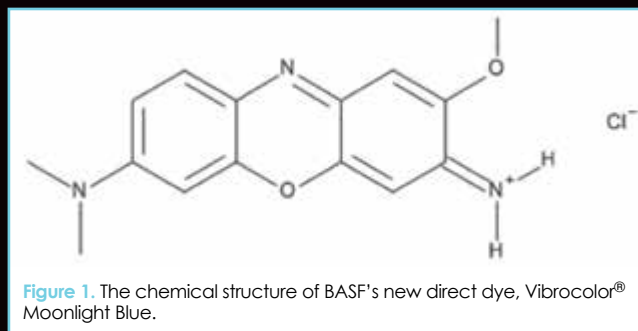


Figure 1. The chemical structure of BASF's new direct dye, Vibracolor® Moonlight Blue.

#### COLOR MAKES THE DIFFERENCE

Moonlight Blue is a new addition to BASF's range of Vibracolor® hair dyes, which adds radiant, brilliant shades to blond or bleached hair. These colors can also lend distinctive tints to dark hair, from brown to chestnut. All dyes can be used for semi-permanent applications with striking fashionable shades, and provide excellent color stability and wash fastness. These cationic hair dyes give consumers the opportunity to achieve hair color that stands out. They are ideally suited for hair coloration because they are attracted to the negatively charged sites of hair fibers. This – combined with their tinctorial strength and extraordinary color brilliance – allows manufacturers to develop products that customers can use to enhance their tone, experiment with a new look or cover unwanted gray hair. With the new direct dye Basic Blue 124, BASF is opening the door for manufacturers to create colors that particularly appeal to the desires of individualistic and creative consumers.

