

# Brilliant Peel<sup>®</sup> Dual Dye

The non-toxic Dual Dye!

NEW



**Geuder<sup>®</sup>**  
Precision made in Germany

**FLUORON<sup>®</sup>**  
Leading in purity and variety

# Testimonies

**“Excellent staining of pre-retinal membranes and vitreous remnants.”**

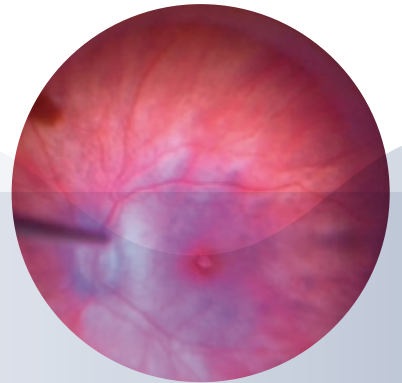
**Senior Consultant Jürgen Steinhauer MD** University Eye Clinic Witten/Herdecke, County Hospital Hagen, St.-Josefs-Hospital, Germany

**“Outstanding staining properties and an impressive sinking behavior makes Brilliant Peel Dual Dye the perfect tool for a safe peeling in epiretinal macular procedures. Flawless for a fast and reliable multiple staining of different membrane parts.”**

**Prof. Dr. Lars-Olof Hattenbach** Director of Eye Clinic Ludwigshafen, Germany

**“Even under yellow UV-IOL the shape of the retinal nerve fiber layer (RNFL) on the ILM was perfectly visible. A highly promising new dye with excellent sinking properties.”**

**A. Viestenz MD** University Clinic of Saarland, Homburg, Germany



Intense and selective staining of ILM, ERM and vitreous remnants

Fast sinking, maximized contact surface with tissue

Easy aspiration

Non-toxic

Physiological osmolarity

Without preserving agents

**Vial** G-81025 Brilliant Peel® Dual Dye 0.5 ml Vial, 5 pcs. per box, sterile

**Syringe** G-81015 Brilliant Peel® Dual Dye 0.5 ml Syringe, 5 pcs. per box, sterile

# Overview of characteristics

## Comparison of Brilliant Blue G (BBG), Bromphenol Blue (BPB), Indocyanine Green (ICG), Trypan Blue (TB), Acid Violet-17 and Lutein for chromocitrectomy<sup>8,9</sup>

|  | Brilliant Peel® Dual Dye           | Other Dyes        |             |                  |               |
|--|------------------------------------|-------------------|-------------|------------------|---------------|
|  | BBG & BPB                          | ICG               | TB          | Acid Violet-17   | Lutein        |
| <b>Chemical Classification</b>                             | Triphenylmethane                   | Cyanine           | Diazo       | Triphenylmethane | Carotinoide   |
| <b>Color</b>   | Blue-Violet                        | Green             | Blue        | Violet           | Yellow-Orange |
| <b>Dye<sup>13</sup></b>                                    | Brilliant Blue G & Bromphenol Blue | Indocyanine Green | Trypan Blue | Acid Violet-17   | Lutein        |
| <b>Toxicity<sup>1, 2, 3, 6, 7, 9, 10, 11, 13, 14</sup></b> | no                                 | yes               | moderate    | moderate         | no            |
| <b>Approval</b>  | yes                                | no                | yes         | yes              | yes           |
| <b>Affinity for ILM<sup>4, 5, 8, 11, 15, 16</sup></b>      | high                               | high              | low         | high             | low           |
| <b>Affinity for ERM<sup>2, 11, 15</sup></b>                | high                               | low               | high        | low              | n.a.          |
| <b>Affinity for vitreous body<sup>11, 12, 15, 16</sup></b> | high                               | low               | low         | low              | high          |
| <b>Exposure time</b>                                       | short                              | short             | long        | short            | short         |
| <b>Liquid/Gas exchange</b>                                 | no                                 | no                | yes         | no               | no            |

**Literature** 1 Lüke C, et al.: Retinal tolerance to dyes, Br J Ophthalmol, 2005, 89, 1188-1191 2 Haritoglou C, et al.: Färbetechniken in der Makulachirurgie, Ophthalmologie, 2006, 103, 927-934 3 Ueno A, et al.: Biocompatibility of Brilliant Blue G in a rat model of subretinal injection, Retina, 2007, 27, 499-504 4 Enaida H, et al.: Brilliant Blue G selectively stains the internal limiting membrane - Brilliant Blue G assisted membrane peeling, Retina, 2006, 26, 631 - 636 5 Enaida H, et al.: Preclinical investigation of internal limiting membrane staining and peeling using intravitreal Brilliant Blue G, Retina, 2006, 26, 623-630 6 Hisatomi T, et al.: Staining ability and biocompatibility of Brilliant Blue G - preclinical study of Brilliant Blue G as an adjunct for capsular staining, Arch Ophthalmol, 2006, 124, 514-519 7 Goldman JM, et al.: Adjunct devices for managing challenging cases in cataract surgery - capsular staining and ophthalmic viscosurgical devices, Curr Opin Ophthalmol, 2007, 18, 52-57 8 Meyer CH, et al.: Historical considerations in applying vital dyes in vitreoretinal surgery: from early experiments to advanced chromovitrectomy, Expert Rev. Ophthalmol., 2007, 71-77 9 Hiebl W, et al.: Substances for staining biological tissues: use of dyes in ophthalmology, Klin Monatsbl Augenheilkd, 2005, 222, 309-311 10 Frank Schuettauf, Christos Haritoglou, Christian A. May, Robert Rejdak, Anna Mankowska, Wolfgang Freyer, Kirsten Eibl, Eberhart Zrenner, Anselm Kampik and Sebastian Thaler, Administration of Novel Dyes for Intraocular Surgery: An In Vivo Toxicity Animal Study, Invest Ophthalmol Vis Sci. 2004; 47:3573-3578 11 Christos Haritoglou, Ricarda G Schumann, Rupert Strauss, Siegfried G Priglinger, Aljoscha S Neubauer, Anselm Kampik, Vitreoretinal surgery using bromphenol blue as a vital stain: evaluation of staining characteristics in humans, Br J Ophthalmol 2007; 91:1125-1128 12 Rodrigues EB, et al.: Vital dyes for chromovitrectomy, Curr Opin Ophthalmol, 2007 May; 18(3):179-87 13 Furlani BA, et al.: Lutein and zeaxanthin toxicity with and without brilliant blue in rabbits. J Ocul Pharmacol Ther. 2014 Sep; 30(7):559-66. doi: 10.1089/jop.2013.0171. Epub 2014 Jun 5. 14 Tura A, et al.: Testing the effects of the dye acid violet-17 on retinal function for an intraocular application in vitreo-retinal surgery. Graefes Arch Clin Exp Ophthalmol. 2014 Dec; 252(12):1927-37. doi: 10.1007/s00417-014-2761-9. Epub 2014 Sep 14. 15 Patent DE102012103097 A1 16 Sousa-Martins D, et al.: Use of lutein and zeaxanthin alone or combined with Brilliant Blue to identify intraocular structures intraoperatively. Retina. 2012 Jul; 32(7):1328-36. doi: 10.1097/IAE.0b013e318239e2b6.

## Composition and properties of Brilliant Peel® Dual Dye

### Composition of one 0.5 ml syringe / vial:

0.125 mg Brilliant Blue G, 0.65 mg Bromphenol Blue, 0.1 ml D<sub>2</sub>O, 0.95 mg Na<sub>2</sub>HPO<sub>4</sub> x 2 H<sub>2</sub>O, 0.15 mg NaH<sub>2</sub>PO<sub>4</sub> x 2 H<sub>2</sub>O, 4.1 mg NaCl, ad 0.5 ml water for injection purposes

**Concentration:** Brilliant Blue G: 0.25 g/l, Bromphenol Blue: 1.3 g/l

**Density:** 1.03 g/cm<sup>3</sup>

Fluoron GmbH reserves the right to make changes to compositions in response to recent developments. Fluoron GmbH and GEUDER AG do not assume liability for the accuracy of given statements. Regarding product availability in the single countries please contact your distributor or GEUDER AG.

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