

Strain identifier

BacDive ID: 1672 **DOI:** 10.13145/bacdive1672.20190402.4
Type strain: yes **Designation:** BF-2819 Hilger
Culture col. no.: DSM 19635, CECT 7311, LMG 2819

Sections

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Name and taxonomic classification

| | | |
|----------------------------|-----------------------------|---|
| Ref.: 8225 | Domain | Bacteria |
| Ref.: 8225 | Phylum | Proteobacteria |
| Ref.: 8225 | Class | Alphaproteobacteria |
| Ref.: 8225 | Order | Rhizobiales |
| Ref.: 8225 | Family | Beijerinckiaceae |
| Ref.: 8225 | Genus | Beijerinckia |
| Ref.: 8225 | Species | Beijerinckia doebereinaerae |
| Ref.: 8225 | Full Scientific Name | Beijerinckia doebereinaerae Oggerin et al. 2009 |
| Ref.: 8225 | Designation: | BF-2819 Hilger |
| Ref.: 8225 | Type strain: | yes |

Prokaryotic Nomenclature Up-to-date (PNU)

| | | |
|-----------------------------|----------------------|-------------------------------------|
| Ref.: 20215 | Domain | Bacteria |
| Ref.: 20215 | Phylum | Proteobacteria |
| Ref.: 20215 | Class | Alphaproteobacteria |
| Ref.: 20215 | Literature reference | Int. J. Syst. Evol. Microbiol. 56:1 |
| Ref.: 20215 | Family | Beijerinckiaceae |
| Ref.: 20215 | Literature reference | Int. J. Syst. Evol. Microbiol. 56:1 |
| Ref.: 20215 | Genus | Beijerinckia |
| Ref.: 20215 | Taxonomical status | genus (AL) |



| | | |
|-------------|-----------------------------|--|
| Ref.: 20215 | Literature reference | Int. J. Syst. Bacteriol. 30:225 |
| Ref.: 20215 | Species | Beijerinckia doebereinae |
| Ref.: 20215 | Taxonomical status | sp. nov. (VP) |
| Ref.: 20215 | Literature reference | Int. J. Syst. Evol. Microbiol. 59:2323* |
| Ref.: 20215 | Full Scientific Name | Beijerinckia doebereinae Oggerin et al. 2009 |

Morphology and physiology

| | | |
|-------------|--------------------------|------------|
| Ref.: 23151 | Gram stain | negative |
| Ref.: 23151 | Cell length | 3.25 µm |
| Ref.: 23151 | Cell width | 1.0 µm |
| Ref.: 23151 | Cell shape | rod-shaped |
| Ref.: 23151 | Motility | no |
| Ref.: 23151 | Colony shape | irregular |
| Ref.: 23151 | Colony color | cream |
| Ref.: 23151 | Incubation period | 5 days |

| Enzymes | Enzyme | Enzyme activity | EC number |
|----------------|-----------------------|------------------------|------------------|
| Ref.: 23151 | acid phosphatase | + | 3.1.3.2 |
| Ref.: 23151 | alkaline phosphatase | + | 3.1.3.1 |
| Ref.: 23151 | alpha-chymotrypsin | - | 3.4.21.1 |
| Ref.: 23151 | alpha-fucosidase | - | 3.2.1.51 |
| Ref.: 23151 | alpha-galactosidase | - | 3.2.1.22 |
| Ref.: 23151 | alpha-glucosidase | + | 3.2.1.20 |
| Ref.: 23151 | alpha-mannosidase | - | 3.2.1.24 |
| Ref.: 23151 | arginine dihydrolase | - | 3.5.3.6 |
| Ref.: 23151 | beta-galactosidase | - | 3.2.1.23 |
| Ref.: 23151 | beta-glucosidase | - | 3.2.1.21 |
| Ref.: 23151 | beta-glucuronidase | - | 3.2.1.31 |
| Ref.: 23151 | catalase | + | 1.11.1.6 |
| Ref.: 23151 | cystine arylamidase | + | 3.4.11.3 |
| Ref.: 23151 | cytochrome oxidase | + | 1.9.3.1 |
| Ref.: 23151 | esterase (C 4) | + | |
| Ref.: 23151 | esterase lipase (C 8) | + | |
| Ref.: 23151 | leucine arylamidase | + | 3.4.11.1 |
| Ref.: 23151 | lipase (C 14) | + | |

| | | | |
|-------------|---------------------------------|---|----------|
| Ref.: 23151 | N-acetyl-beta-glucosaminidase | - | 3.2.1.52 |
| Ref.: 23151 | naphthol-AS-BI-phosphohydrolase | + | |
| Ref.: 23151 | trypsin | + | 3.4.21.4 |
| Ref.: 23151 | tryptophan deaminase | + | 4.1.99.1 |
| Ref.: 23151 | tryptophan deaminase | - | 4.1.99.1 |
| Ref.: 23151 | urease | - | 3.5.1.5 |
| Ref.: 23151 | valine arylamidase | + | |

Metabolite production

| | Chebi ID | Metabolite | Production |
|-------------|----------|------------|------------|
| Ref.: 23151 | 35581 | Indole | no |

Physiological tests

| | Chebi ID | Metabolite | Indole-test |
|-------------|----------|------------|-------------|
| Ref.: 23151 | 35581 | Indole | - |

Metabolite utilization

| | Chebi ID | Metabolite | Utilization activity | Kind of utilization tested |
|-------------|----------|-------------------------|----------------------|----------------------------|
| Ref.: 23151 | 16808 | 2-Dehydro-D-glucuronate | - | carbon source |
| Ref.: 23151 | 17426 | 5-Dehydro-D-glucuronate | - | carbon source |
| Ref.: 23151 | 30832 | Adipic acid | - | growth |
| Ref.: 23151 | 27613 | Amygdalin | - | carbon source |
| Ref.: 23151 | 18305 | Arbutin | - | carbon source |
| Ref.: 23151 | 27689 | Caproate | - | growth |
| Ref.: 23151 | 17057 | Cellobiose | - | carbon source |
| Ref.: 23151 | 30769 | Citric acid | - | growth |
| Ref.: 23151 | 15963 | D-Adonitol | - | carbon source |
| Ref.: 23151 | 17108 | D-Arabinose | - | carbon source |
| Ref.: 23151 | 18333 | D-Arabitol | - | carbon source |
| Ref.: 23151 | 15824 | D-Fructose | + | carbon source |
| Ref.: 23151 | 28847 | D-Fucose | + | carbon source |
| Ref.: 23151 | 12936 | D-Galactose | + | carbon source |
| Ref.: 23151 | 17634 | D-Glucose | - | growth |
| Ref.: 23151 | 17634 | D-Glucose | + | carbon source |
| Ref.: 23151 | 62318 | D-Lyxose | + | carbon source |
| Ref.: 23151 | 16899 | D-Mannitol | - | carbon source |
| Ref.: 23151 | 16899 | D-Mannitol | - | growth |

| | | | | |
|-------------|--------|------------------------------------|---|------------------|
| Ref.: 23151 | 16024 | D-Mannose | - | growth |
| Ref.: 23151 | 16024 | D-Mannose | + | carbon source |
| Ref.: 23151 | 16988 | D-Ribose | - | carbon source |
| Ref.: 23151 | 17924 | D-Sorbitol | - | carbon source |
| Ref.: 23151 | 16443 | D-Tagatose | - | carbon source |
| Ref.: 23151 | 65327 | D-Xylose | - | carbon source |
| Ref.: 23151 | 17113 | Erythritol | - | carbon source |
| Ref.: 23151 | 4853 | Esculin | - | carbon source |
| Ref.: 23151 | 4853 | Esculin | - | hydrolysis |
| Ref.: 23151 | 16813 | Galactitol | - | carbon source |
| Ref.: 23151 | 5291 | Gelatin | - | hydrolysis |
| Ref.: 23151 | 28066 | Gentiobiose | - | carbon source |
| Ref.: 23151 | 24265 | Gluconate | - | growth |
| Ref.: 23151 | 17234 | Glucose | - | builds acid from |
| Ref.: 23151 | 17754 | Glycerol | - | carbon source |
| Ref.: 23151 | 28087 | Glycogen | - | carbon source |
| Ref.: 23151 | 17268 | Inositol | - | carbon source |
| Ref.: 23151 | 15443 | Inulin | - | carbon source |
| Ref.: 23151 | 30849 | L-Arabinose | - | growth |
| Ref.: 23151 | 30849 | L-Arabinose | + | carbon source |
| Ref.: 23151 | 18403 | L-Arabitol | - | carbon source |
| Ref.: 23151 | 18287 | L-Fucose | - | carbon source |
| Ref.: 23151 | 62345 | L-Rhamnose | - | carbon source |
| Ref.: 23151 | 17266 | L-Sorbose | - | carbon source |
| Ref.: 23151 | 65328 | L-Xylose | + | carbon source |
| Ref.: 23151 | 17716 | Lactose | - | carbon source |
| Ref.: 23151 | 6650 | Malic acid | - | growth |
| Ref.: 23151 | 17306 | Maltose | - | growth |
| Ref.: 23151 | 17306 | Maltose | + | carbon source |
| Ref.: 23151 | 6731 | Melezitose | - | carbon source |
| Ref.: 23151 | 28053 | Melibiose | - | carbon source |
| Ref.: 23151 | 320061 | Methyl alpha-D-glu copyranoside | + | carbon source |
| Ref.: 23151 | 43943 | Methyl alpha-D-mannoside | - | carbon source |
| Ref.: 23151 | 74863 | Methyl beta-D-xylo pyranoside | - | carbon source |
| Ref.: 23151 | 506227 | N-Acetylglucosamin e | - | carbon source |

| | | | | |
|-------------|--------|---------------------|---|---------------|
| Ref.: 23151 | 506227 | N-Acetylglucosamine | - | growth |
| Ref.: 23151 | 17632 | Nitrate | + | reduction |
| Ref.: 23151 | 30745 | Phenylacetic acid | - | growth |
| Ref.: 23151 | 32032 | Potassium gluconate | - | carbon source |
| Ref.: 23151 | 16634 | Raffinose | - | carbon source |
| Ref.: 23151 | 17814 | Salicin | - | carbon source |
| Ref.: 23151 | 28017 | Starch | - | carbon source |
| Ref.: 23151 | 17992 | Sucrose | + | carbon source |
| Ref.: 23151 | 27082 | Trehalose | - | carbon source |
| Ref.: 23151 | 27897 | Tryptophan | - | energy source |
| Ref.: 23151 | 27897 | Tryptophan | + | energy source |
| Ref.: 23151 | 32528 | Turanose | + | carbon source |
| Ref.: 23151 | 17151 | Xylitol | - | carbon source |

Ref.: 23151 **Ability of spore formation** no

Culture and growth conditions

Ref.: 8225 **Culture medium** BEIJERINCKIA DOEBEREINERAE MEDIUM (DSMZ Medium 1215), 28°C

Ref.: 8225 **Culture medium growth** yes

Ref.: 8225 **Culture medium link** https://www.dsmz.de/microorganisms/medium/pdf/DSMZ_Medium1215.pdf

Temperatures

Ref.: 8225
Ref.: 23151
Ref.: 23151
Ref.: 23151

| Kind of temperature | Temperature |
|---------------------|-------------|
| growth | 28 °C |
| growth | 10-35 °C |
| growth | 37 °C |
| optimum | 30 °C |

Ref.: 8225 **Temperature range** mesophilic

Ref.: 23151 **Temperature range** mesophilic

pH

Ref.: 23151
Ref.: 23151

| Kind of pH | pH |
|------------|------|
| growth | 3-10 |
| optimum | 6.5 |

Application and interaction

Ref.: 8225 **Biosafety level** 1 Risk group (German classification)

Molecular biology

Ref.: 8225 **GC-content** 57.1 mol% high performance liquid chromatography (HPLC)

Ref.: 23151 **GC-content** 57.1 mol% high performance liquid chromatography (HPLC)

| | Sequence database | Sequence accession description | Sequence accession number | Sequence length(bp) | Associated NCBI tax ID |
|------------|---------------------------|--|---------------------------|---------------------|------------------------|
| Ref.: 8225 | GenBank Direct submission | Beijerinckia doebereineriae strain LMG 2819 16S ribosomal RNA gene, partial sequence | EU401905 | 1453 | 1403274 |

Strain availability

Ref.: 8225 **Culture collection no.** DSM 19635, CECT 7311, LMG 2819

Ref.: 8225 **Strain history** <- M. Oggerin de Orube, Centro de Ciencias Medioambientales, CSIC, Madrid, Spain; BF-2819 <- ? <- LMG; LMG 2819 <- F. Hilger (exact strain not specified by LMG)

Associated Passport(s) in StrainInfo

Ref.: 20218 844817 - <http://www.straininfo.net/strains/844817>

Ref.: 20218 844464 - <http://www.straininfo.net/strains/844464>

Ref.: 20218 5266 - <http://www.straininfo.net/strains/5266>

References

Ref.: 8225 Leibniz Institut DSMZ-Deutsche Sammlung von Mikroorganismen und Zellkulturen GmbH; Curators of the DSMZ; DSM 19635

Ref.: 20215 D.Gleim, M.Kracht, N.Weiss et. al.: Prokaryotic Nomenclature Up-to-date - compilation of all names of Bacteria and Archaea, validly published according to the Bacteriological Code since 1. Jan. 1980, and validly published nomenclatural changes since.

Ref.: 20218 Verslyppe, B., De Smet, W., De Baets, B., De Vos, P., Dawyndt P. StrainInfo introduces electronic passports for microorganisms.. Syst Appl Microbiol. 37: 42-50 2014 (10.1016/j.syapm.2013.11.002, 24321274)

[Ref.: 23151](#)

Monike Oggerin, David R. Arahal, Víctor Rubio, Irma Mar Identification of *Beijerinckia fluminensis* strains CIP 106281T and UQM 1685T as *Rhizobium radiobacter* strains, and proposal of *Beijerinckia doebereinae* sp. nov. to accommodate *Beijerinckia fluminensis* LMG 2819. IJSEM 59: 2323-2328 2009 (10.1099/ijs.0.006593-0, None)

*** These References are textmined**

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