

# ISO/IEC 30106-1:2016-03 (E)

## Information technology - Object oriented BioAPI - Part 1: Architecture

---

| <b>Contents</b>    |  | <b>Page</b> |
|--------------------|--|-------------|
| Foreword .....     |  | iv          |
| Introduction ..... |  | v           |
| <b>1</b>           | <b>Scope .....</b>                               | <b>1</b>    |
| <b>2</b>           | <b>Normative references .....</b>                | <b>1</b>    |
| <b>3</b>           | <b>Terms and definitions .....</b>               | <b>1</b>    |
| <b>4</b>           | <b>Symbols and abbreviated terms .....</b>       | <b>1</b>    |
| <b>5</b>           | <b>Object Oriented BioAPI architecture .....</b> | <b>2</b>    |
| 5.1                | Summary of BioAPI architecture .....             | 2           |
| 5.2                | BioAPI compatibility requirements .....          | 4           |
| 5.3                | Graphical User Interface (GUI) .....             | 4           |
| 5.4                | Implementation guidelines .....                  | 6           |
| 5.4.1              | Basic concepts .....                             | 6           |
| 5.4.2              | BioAPI_Unit development .....                    | 6           |
| 5.4.3              | BFP development .....                            | 6           |
| 5.4.4              | BSP development .....                            | 7           |
| 5.4.5              | Framework and component registry .....           | 8           |
| 5.4.6              | Application development .....                    | 8           |
| <b>6</b>           | <b>BioAPI CBEFF Patron Formats .....</b>         | <b>8</b>    |
| 6.1                | General .....                                    | 8           |
| 6.2                | Simple BIR .....                                 | 8           |
| 6.3                | Complex BIR .....                                | 14          |
| 6.3.1              | Structure .....                                  | 14          |
| 6.3.2              | Child BIR .....                                  | 14          |
| 6.3.3              | Parent BIR .....                                 | 14          |
| <b>7</b>           | <b>Constants .....</b>                           | <b>17</b>   |
| 7.1                | General .....                                    | 17          |
| 7.2                | Biometric types .....                            | 17          |
| 7.3                | Biometric subtypes .....                         | 17          |
| 7.4                | Error codes .....                                | 18          |
| <b>8</b>           | <b>OO BioAPI UML structure .....</b>             | <b>21</b>   |
| 8.1                | General .....                                    | 21          |
| 8.2                | Relationships among data structures .....        | 22          |
| 8.2.1              | Class BIR .....                                  | 22          |
| 8.2.2              | Class UnitSchema .....                           | 23          |
| 8.2.3              | Class BFPSchema .....                            | 24          |
| 8.2.4              | Class BSPSchema .....                            | 24          |
| 8.2.5              | Class FrameworkSchema .....                      | 25          |
| 8.3                | BioAPI_Unit structures .....                     | 25          |
| 8.3.1              | IArchive .....                                   | 25          |
| 8.3.2              | IComparison .....                                | 26          |
| 8.3.3              | IProcessing .....                                | 26          |
| 8.3.4              | ISensor .....                                    | 27          |
| 8.4                | BFP Structure .....                              | 27          |

|     |  |           |
|-----|--|-----------|
| 8.5 | <b>BSP Structure .....</b>                 | <b>28</b> |
| 8.6 | <b>Framework structure .....</b>           | <b>28</b> |
| 8.7 | <b>Application related structure .....</b> | <b>29</b> |