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Information technology -- Conformance testing for the biometric application programming interface (BioAPI) -- Part 1: Methods and procedures

Developed by



Where IT all begins



INCITS/ISO/IEC 24709-1:2017 (2019)

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Part 1: Methods and procedures

*Technologies de l'information — Test de conformité pour l'interface
de programmation d'applications biométriques (BioAPI) —*

Partie 1: Méthodes et procédures



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Contents

| | Page |
|--|------------|
| Foreword | xix |
| Introduction | xx |
| 1 Scope | 1 |
| 2 Normative references | 1 |
| 3 Terms and definitions | 1 |
| 4 Abbreviated terms | 3 |
| 5 Conformance | 3 |
| 6 Conformance testing methodology | 4 |
| 6.1 General..... | 4 |
| 6.1.1 Implementation under test..... | 4 |
| 6.1.2 Test method..... | 5 |
| 6.1.3 Standard BioAPI components and standard BioAPI interfaces..... | 6 |
| 6.1.4 Physical architectures..... | 7 |
| 6.2 Conformance testing models..... | 8 |
| 6.3 Abstract test engine..... | 13 |
| 7 General properties of the assertion language | 14 |
| 7.1 General..... | 14 |
| 7.2 Variables..... | 17 |
| 7.3 Built-in variables..... | 18 |
| 7.4 Representation of integers..... | 18 |
| 7.5 Representation of Booleans..... | 19 |
| 7.6 Representation of universally unique identifiers (UUIDs)..... | 19 |
| 7.7 Representation of octet strings..... | 19 |
| 7.8 XML documents..... | 20 |
| 8 Elements of the assertion language | 20 |
| 8.1 Element <package>..... | 20 |
| 8.1.1 Syntax..... | 20 |
| 8.1.2 Semantics..... | 20 |
| 8.1.3 Example (non-normative)..... | 21 |
| 8.2 Element <assertion> (child of <package>)..... | 21 |
| 8.2.1 Syntax..... | 21 |
| 8.2.2 Semantics..... | 22 |
| 8.2.3 Example (non-normative)..... | 22 |
| 8.3 Element <input> (child of <assertion>)..... | 23 |
| 8.3.1 Syntax..... | 23 |
| 8.3.2 Semantics..... | 23 |
| 8.3.3 Example (non-normative)..... | 23 |
| 8.4 Element <invoke> (child of <assertion>)..... | 23 |
| 8.4.1 Syntax..... | 23 |
| 8.4.2 Semantics..... | 24 |
| 8.4.3 Example (non-normative)..... | 24 |
| 8.5 Element <input> (child of <invoke>)..... | 24 |
| 8.5.1 Syntax..... | 24 |
| 8.5.2 Semantics..... | 25 |
| 8.5.3 Example (non-normative)..... | 25 |
| 8.6 Element <output> (child of <invoke>)..... | 25 |
| 8.6.1 Syntax..... | 25 |
| 8.6.2 Semantics..... | 26 |
| 8.7 Element <return> (child of <invoke>)..... | 26 |
| 8.7.1 Syntax..... | 26 |
| 8.7.2 Semantics..... | 27 |

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| | | |
|--------|---|----|
| 8.8 | Element <bind> (child of <assertion>) | 27 |
| 8.8.1 | Syntax | 27 |
| 8.8.2 | Semantics | 27 |
| 8.9 | Element <activity> (child of <package>) | 28 |
| 8.9.1 | Syntax | 28 |
| 8.9.2 | Semantics | 29 |
| 8.9.3 | Example (non-normative) | 32 |
| 8.10 | Element <input> (child of <activity>) | 35 |
| 8.10.1 | Syntax | 35 |
| 8.10.2 | Semantics | 35 |
| 8.11 | Element <output> (child of <activity>) | 35 |
| 8.11.1 | Syntax | 35 |
| 8.11.2 | Semantics | 35 |
| 8.12 | Element <set> | 36 |
| 8.12.1 | Syntax | 36 |
| 8.12.2 | Semantics | 36 |
| 8.13 | Element <add> | 37 |
| 8.13.1 | Syntax | 37 |
| 8.13.2 | Semantics | 37 |
| 8.14 | Element <subtract> | 38 |
| 8.14.1 | Syntax | 38 |
| 8.14.2 | Semantics | 38 |
| 8.15 | Element <invoke> (child of <activity>) | 39 |
| 8.15.1 | Syntax | 39 |
| 8.15.2 | Semantics | 39 |
| 8.15.3 | Example (non-normative) | 42 |
| 8.16 | Element <only_if> | 42 |
| 8.16.1 | Syntax | 42 |
| 8.16.2 | Semantics | 43 |
| 8.17 | Element <wait_until> | 43 |
| 8.17.1 | Syntax | 43 |
| 8.17.2 | Semantics | 44 |
| 8.18 | Element <assert_condition> | 45 |
| 8.18.1 | Syntax | 45 |
| 8.18.2 | Semantics | 45 |
| 8.19 | Element <and> | 46 |
| 8.19.1 | Syntax | 46 |
| 8.19.2 | Semantics | 46 |
| 8.20 | Element <or> | 47 |
| 8.20.1 | Syntax | 47 |
| 8.20.2 | Semantics | 47 |
| 8.21 | Element <xor> | 47 |
| 8.21.1 | Syntax | 47 |
| 8.21.2 | Semantics | 48 |
| 8.22 | Element <not> | 48 |
| 8.22.1 | Syntax | 48 |
| 8.22.2 | Semantics | 48 |
| 8.23 | Element <equal_to> | 49 |
| 8.23.1 | Syntax | 49 |
| 8.23.2 | Semantics | 49 |
| 8.24 | Element <not_equal_to> | 50 |
| 8.24.1 | Syntax | 50 |
| 8.24.2 | Semantics | 50 |
| 8.25 | Element <greater_than> | 50 |
| 8.25.1 | Syntax | 50 |
| 8.25.2 | Semantics | 50 |
| 8.26 | Element <greater_than_or_equal_to> | 50 |
| 8.26.1 | Syntax | 50 |

This is a preview of "INCITS/ISO/IEC 24709...". Click here to purchase the full version from the ANSI store.

| | | |
|----------|---|-----------|
| 8.26.2 | Semantics | 50 |
| 8.27 | Element <less_than> | 50 |
| 8.27.1 | Syntax | 50 |
| 8.27.2 | Semantics | 50 |
| 8.28 | Element <less_than_or_equal_to> | 51 |
| 8.28.1 | Syntax | 51 |
| 8.28.2 | Semantics | 51 |
| 8.29 | Element <same_as> | 51 |
| 8.29.1 | Syntax | 51 |
| 8.29.2 | Semantics | 51 |
| 8.30 | Element <not_same_as> | 52 |
| 8.30.1 | Syntax | 52 |
| 8.30.2 | Semantics | 52 |
| 8.31 | Element <existing> | 52 |
| 8.31.1 | Syntax | 52 |
| 8.31.2 | Semantics | 52 |
| 8.32 | Element <not_existing> | 53 |
| 8.32.1 | Syntax | 53 |
| 8.32.2 | Semantics | 53 |
| 9 | Standard interface functions | 53 |
| 9.1 | General | 53 |
| 9.2 | Parameter groups | 60 |
| 9.2.1 | General | 60 |
| 9.2.2 | Parameter group "Biometric type" | 60 |
| 9.2.3 | Parameter group "Operations" | 62 |
| 9.2.4 | Parameter group "Options" | 64 |
| 9.2.5 | Parameter group "Events" | 66 |
| 9.2.6 | Parameter group "Biometric data type" | 67 |
| 9.2.7 | Parameter group "Biometric subtype" | 68 |
| 9.2.8 | Parameter group "Date" | 69 |
| 9.2.9 | Parameter group "Date and time" | 70 |
| 9.2.10 | Parameter group "Framework schema" | 71 |
| 9.2.11 | Parameter group "BSP schema" | 72 |
| 9.2.12 | Parameter group "BFP schema" | 76 |
| 9.2.13 | Parameter group "Unit schema" | 78 |
| 9.2.14 | Parameter group "BIR header" | 81 |
| 9.2.15 | Parameter group "BIR" | 84 |
| 9.2.16 | Parameter group "Input BIR" | 85 |
| 9.2.17 | Parameter group "Identify population" | 86 |
| 9.2.18 | Parameter group "Candidate" | 88 |
| 9.2.19 | Parameter group "GUI state" | 90 |
| 9.2.20 | Parameter group "Access type" | 90 |
| 9.2.21 | Parameter group "GUI Event Subscription" | 91 |
| 9.2.22 | Parameter group "Key Information" | 92 |
| 9.2.23 | Parameter group "Key Transport" | 93 |
| 9.2.24 | Parameter group "MAC Algorithm Information" | 93 |
| 9.2.25 | Parameter group "Security Options Mask" | 94 |
| 9.2.26 | Parameter group "Security Profile" | 95 |
| 9.2.27 | Parameter group "ACBio parameters" | 97 |
| 9.2.28 | Parameter group "BFP List Element parameters" | 98 |
| 9.2.29 | Parameter group "Biometric subtype mask" | 98 |
| 9.2.30 | Parameter group "ENCRYPTION INFO" | 100 |
| 9.3 | BioAPI_Init | 101 |
| 9.3.1 | Function invocation scheme | 101 |
| 9.3.2 | Constraints on the parameters | 101 |
| 9.3.3 | Function invocation input | 101 |
| 9.3.4 | Function invocation output | 101 |
| 9.3.5 | Bound activity invocation input | 101 |

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| | | |
|--------|---------------------------------------|-----|
| 9.3.6 | Bound activity invocation output..... | 102 |
| 9.4 | BioAPI_Terminate..... | 102 |
| 9.4.1 | Function invocation scheme..... | 102 |
| 9.4.2 | Constraints on the parameters..... | 102 |
| 9.4.3 | Function invocation input..... | 102 |
| 9.4.4 | Function invocation output..... | 102 |
| 9.4.5 | Bound activity invocation input..... | 102 |
| 9.4.6 | Bound activity invocation output..... | 102 |
| 9.5 | BioAPI_GetFrameworkInfo..... | 103 |
| 9.5.1 | Function invocation scheme..... | 103 |
| 9.5.2 | Constraints on the parameters..... | 103 |
| 9.5.3 | Function invocation input..... | 103 |
| 9.5.4 | Function invocation output..... | 103 |
| 9.5.5 | Bound activity invocation input..... | 104 |
| 9.5.6 | Bound activity invocation output..... | 104 |
| 9.6 | BioAPI_EnumBSPs..... | 104 |
| 9.6.1 | Function invocation scheme..... | 104 |
| 9.6.2 | Constraints on the parameters..... | 105 |
| 9.6.3 | Function invocation input..... | 105 |
| 9.6.4 | Function invocation output..... | 105 |
| 9.6.5 | Bound activity invocation input..... | 105 |
| 9.6.6 | Bound activity invocation output..... | 106 |
| 9.7 | BioAPI_BSPLoad..... | 106 |
| 9.7.1 | Function invocation scheme..... | 106 |
| 9.7.2 | Constraints on the parameters..... | 106 |
| 9.7.3 | Function invocation input..... | 106 |
| 9.7.4 | Function invocation output..... | 107 |
| 9.7.5 | Bound activity invocation input..... | 107 |
| 9.7.6 | Bound activity invocation output..... | 107 |
| 9.8 | BioAPI_BSPUnload..... | 107 |
| 9.8.1 | Function invocation scheme..... | 107 |
| 9.8.2 | Constraints on the parameters..... | 108 |
| 9.8.3 | Function invocation input..... | 108 |
| 9.8.4 | Function invocation output..... | 108 |
| 9.8.5 | Bound activity invocation input..... | 108 |
| 9.8.6 | Bound activity invocation output..... | 109 |
| 9.9 | BioAPI_BSPAttach..... | 109 |
| 9.9.1 | Function invocation scheme..... | 109 |
| 9.9.2 | Constraints on the parameters..... | 109 |
| 9.9.3 | Function invocation input..... | 110 |
| 9.9.4 | Function invocation output..... | 110 |
| 9.9.5 | Bound activity invocation input..... | 110 |
| 9.9.6 | Bound activity invocation output..... | 111 |
| 9.10 | BioAPI_BSPDetach..... | 111 |
| 9.10.1 | Function invocation scheme..... | 111 |
| 9.10.2 | Constraints on the parameters..... | 111 |
| 9.10.3 | Function invocation input..... | 111 |
| 9.10.4 | Function invocation output..... | 112 |
| 9.10.5 | Bound activity invocation input..... | 112 |
| 9.10.6 | Bound activity invocation output..... | 112 |
| 9.11 | BioAPI_QueryUnits..... | 112 |
| 9.11.1 | Function invocation scheme..... | 112 |
| 9.11.2 | Constraints on the parameters..... | 113 |
| 9.11.3 | Function invocation input..... | 113 |
| 9.11.4 | Function invocation output..... | 114 |
| 9.11.5 | Bound activity invocation input..... | 114 |
| 9.11.6 | Bound activity invocation output..... | 114 |
| 9.12 | BioAPI_EnumBFPs..... | 114 |

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| | | |
|--------|--|-----|
| 9.12.1 | Function invocation scheme | 114 |
| 9.12.2 | Constraints on the parameters | 115 |
| 9.12.3 | Function invocation input | 115 |
| 9.12.4 | Function invocation output | 116 |
| 9.12.5 | Bound activity invocation input | 116 |
| 9.12.6 | Bound activity invocation output | 116 |
| 9.13 | BioAPI_QueryBFPs | 116 |
| 9.13.1 | Function invocation scheme | 116 |
| 9.13.2 | Constraints on the parameters | 117 |
| 9.13.3 | Function invocation input | 117 |
| 9.13.4 | Function invocation output | 118 |
| 9.13.5 | Bound activity invocation input | 118 |
| 9.13.6 | Bound activity invocation output | 118 |
| 9.14 | BioAPI_ControlUnit | 118 |
| 9.14.1 | Function invocation scheme | 118 |
| 9.14.2 | Constraints on the parameters | 119 |
| 9.14.3 | Function invocation input | 119 |
| 9.14.4 | Function invocation output | 119 |
| 9.14.5 | Bound activity invocation input | 120 |
| 9.14.6 | Bound activity invocation output | 120 |
| 9.15 | BioAPI_LinkToEndpoint | 120 |
| 9.15.1 | Function invocation scheme | 120 |
| 9.15.2 | Constraints on the parameter | 120 |
| 9.15.3 | Function invocation input | 121 |
| 9.15.4 | Function invocation output | 121 |
| 9.15.5 | Bound activity invocation input | 121 |
| 9.15.6 | Bound activity invocation output | 121 |
| 9.16 | BioAPI_UnlinkFromEndpoint | 121 |
| 9.16.1 | Function invocation scheme | 121 |
| 9.16.2 | Constraints on the parameter | 121 |
| 9.16.3 | Function invocation input | 122 |
| 9.16.4 | Function invocation output | 122 |
| 9.16.5 | Bound activity invocation input | 122 |
| 9.16.6 | Bound activity invocation output | 122 |
| 9.17 | BioAPI_EnumFrameworks | 122 |
| 9.17.1 | Function invocation scheme | 122 |
| 9.17.2 | Constraints on the parameters | 123 |
| 9.17.3 | Function invocation input | 123 |
| 9.17.4 | Function invocation output | 123 |
| 9.17.5 | Bound activity invocation input | 123 |
| 9.17.6 | Bound activity invocation output | 123 |
| 9.18 | BioAPI_FreeBIRHandle | 124 |
| 9.18.1 | Function invocation scheme | 124 |
| 9.18.2 | Constraints on the parameters | 124 |
| 9.18.3 | Function invocation input | 124 |
| 9.18.4 | Function invocation output | 124 |
| 9.18.5 | Bound activity invocation input | 124 |
| 9.18.6 | Bound activity invocation output | 125 |
| 9.19 | BioAPI_GetBIRFromHandle | 125 |
| 9.19.1 | Function invocation scheme | 125 |
| 9.19.2 | Constraints on the parameters | 125 |
| 9.19.3 | Function invocation input | 126 |
| 9.19.4 | Function invocation output | 126 |
| 9.19.5 | Bound activity invocation input | 126 |
| 9.19.6 | Bound activity invocation output | 126 |
| 9.20 | BioAPI_GetHeaderFromHandle | 126 |
| 9.20.1 | Function invocation scheme | 126 |
| 9.20.2 | Constraints on the parameters | 127 |

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| | | |
|--------|--|-----|
| 9.20.3 | Function invocation input..... | 127 |
| 9.20.4 | Function invocation output..... | 127 |
| 9.20.5 | Bound activity invocation input..... | 128 |
| 9.20.6 | Bound activity invocation output..... | 128 |
| 9.21 | BioAPI_EnableEvents..... | 128 |
| 9.21.1 | Function invocation scheme..... | 128 |
| 9.21.2 | Constraints on the parameters..... | 128 |
| 9.21.3 | Function invocation input..... | 129 |
| 9.21.4 | Function invocation output..... | 129 |
| 9.21.5 | Bound activity invocation input..... | 129 |
| 9.21.6 | Bound activity invocation output..... | 129 |
| 9.22 | BioAPI_NotifyGUIProgressEvent..... | 130 |
| 9.22.1 | Function invocation scheme..... | 130 |
| 9.22.2 | Constraints on the parameters..... | 131 |
| 9.22.3 | Function invocation input..... | 131 |
| 9.22.4 | Function invocation output..... | 131 |
| 9.22.5 | Bound activity invocation input..... | 132 |
| 9.22.6 | Bound activity invocation output..... | 132 |
| 9.23 | BioAPI_NotifyGUISelectEvent..... | 132 |
| 9.23.1 | Function invocation scheme..... | 132 |
| 9.23.2 | Constraints on the parameters..... | 133 |
| 9.23.3 | Function invocation input..... | 134 |
| 9.23.4 | Function invocation output..... | 134 |
| 9.23.5 | Bound activity invocation input..... | 134 |
| 9.23.6 | Bound activity invocation output..... | 135 |
| 9.24 | BioAPI_NotifyGUIStateEvent..... | 135 |
| 9.24.1 | Function invocation scheme..... | 135 |
| 9.24.2 | Constraints on the parameters..... | 136 |
| 9.24.3 | Function invocation input..... | 137 |
| 9.24.4 | Function invocation output..... | 137 |
| 9.24.5 | Bound activity invocation input..... | 137 |
| 9.24.6 | Bound activity invocation output..... | 138 |
| 9.25 | BioAPI_QueryGUIEventSubscriptions..... | 138 |
| 9.25.1 | Function invocation scheme..... | 138 |
| 9.25.2 | Constraints on the parameters..... | 139 |
| 9.25.3 | Function invocation input..... | 139 |
| 9.25.4 | Function invocation output..... | 139 |
| 9.25.5 | Bound activity invocation input..... | 139 |
| 9.25.6 | Bound activity invocation output..... | 139 |
| 9.26 | BioAPI_RedirectGUIEvents..... | 140 |
| 9.26.1 | Function invocation scheme..... | 140 |
| 9.26.2 | Constraints on the parameters..... | 140 |
| 9.26.3 | Function invocation input..... | 141 |
| 9.26.4 | Function invocation output..... | 141 |
| 9.26.5 | Bound activity invocation input..... | 141 |
| 9.26.6 | Bound activity invocation output..... | 141 |
| 9.27 | BioAPI_SubscribeToGUIEvents..... | 142 |
| 9.27.1 | Function invocation scheme..... | 142 |
| 9.27.2 | Constraints on the parameters..... | 142 |
| 9.27.3 | Function invocation input..... | 143 |
| 9.27.4 | Function invocation output..... | 143 |
| 9.27.5 | Bound activity invocation input..... | 143 |
| 9.27.6 | Bound activity invocation output..... | 144 |
| 9.28 | BioAPI_UnredirectGUIEvents..... | 144 |
| 9.28.1 | Function invocation scheme..... | 144 |
| 9.28.2 | Constraints on the parameters..... | 144 |
| 9.28.3 | Function invocation input..... | 145 |
| 9.28.4 | Function invocation output..... | 145 |

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| | | | |
|------|--------|---------------------------------------|-----|
| | 9.28.5 | Bound activity invocation input..... | 145 |
| | 9.28.6 | Bound activity invocation output..... | 145 |
| 9.29 | | BioAPI_UnsubscribeFromGUIEvents..... | 146 |
| | 9.29.1 | Function invocation scheme..... | 146 |
| | 9.29.2 | Constraints on the parameters..... | 146 |
| | 9.29.3 | Function invocation input..... | 147 |
| | 9.29.4 | Function invocation output..... | 147 |
| | 9.29.5 | Bound activity invocation input..... | 147 |
| | 9.29.6 | Bound activity invocation output..... | 147 |
| 9.30 | | BioAPI_SetGUICallbacks..... | 148 |
| | 9.30.1 | Function invocation scheme..... | 148 |
| | 9.30.2 | Constraints on the parameters..... | 148 |
| | 9.30.3 | Function invocation input..... | 148 |
| | 9.30.4 | Function invocation output..... | 149 |
| | 9.30.5 | Bound activity invocation input..... | 149 |
| | 9.30.6 | Bound activity invocation output..... | 149 |
| 9.31 | | BioAPI_Capture..... | 150 |
| | 9.31.1 | Function invocation scheme..... | 150 |
| | 9.31.2 | Constraints on the parameters..... | 150 |
| | 9.31.3 | Function invocation input..... | 151 |
| | 9.31.4 | Function invocation output..... | 151 |
| | 9.31.5 | Bound activity invocation input..... | 151 |
| | 9.31.6 | Bound activity invocation output..... | 152 |
| 9.32 | | BioAPI_CreateTemplate..... | 152 |
| | 9.32.1 | Function invocation scheme..... | 152 |
| | 9.32.2 | Constraints on the parameters..... | 153 |
| | 9.32.3 | Function invocation input..... | 154 |
| | 9.32.4 | Function invocation output..... | 154 |
| | 9.32.5 | Bound activity invocation input..... | 155 |
| | 9.32.6 | Bound activity invocation output..... | 155 |
| 9.33 | | BioAPI_Process..... | 155 |
| | 9.33.1 | Function invocation scheme..... | 155 |
| | 9.33.2 | Constraints on the parameters..... | 156 |
| | 9.33.3 | Function invocation input..... | 156 |
| | 9.33.4 | Function invocation output..... | 157 |
| | 9.33.5 | Bound activity invocation input..... | 157 |
| | 9.33.6 | Bound activity invocation output..... | 157 |
| 9.34 | | BioAPI_ProcessUsingAuxBIRs..... | 158 |
| | 9.34.1 | Function invocation scheme..... | 158 |
| | 9.34.2 | Constraints on the parameters..... | 158 |
| | 9.34.3 | Function invocation input..... | 159 |
| | 9.34.4 | Function invocation output..... | 159 |
| | 9.34.5 | Bound activity invocation input..... | 159 |
| | 9.34.6 | Bound activity invocation output..... | 160 |
| 9.35 | | BioAPI_VerifyMatch..... | 160 |
| | 9.35.1 | Function invocation scheme..... | 160 |
| | 9.35.2 | Constraints on the parameters..... | 161 |
| | 9.35.3 | Function invocation input..... | 162 |
| | 9.35.4 | Function invocation output..... | 162 |
| | 9.35.5 | Bound activity invocation input..... | 163 |
| | 9.35.6 | Bound activity invocation output..... | 163 |
| 9.36 | | BioAPI_VerifyMatchUsingAuxBIRs..... | 163 |
| | 9.36.1 | Function invocation scheme..... | 163 |
| | 9.36.2 | Constraints on the parameters..... | 164 |
| | 9.36.3 | Function invocation input..... | 165 |
| | 9.36.4 | Function invocation output..... | 165 |
| | 9.36.5 | Bound activity invocation input..... | 166 |
| | 9.36.6 | Bound activity invocation output..... | 166 |

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| | | |
|--------|----------------------------------|-----|
| 9.37 | BioAPI_IdentifyMatch | 167 |
| 9.37.1 | Function invocation scheme | 167 |
| 9.37.2 | Constraints on the parameters | 168 |
| 9.37.3 | Function invocation input | 169 |
| 9.37.4 | Function invocation output | 169 |
| 9.37.5 | Bound activity invocation input | 170 |
| 9.37.6 | Bound activity invocation output | 170 |
| 9.38 | BioAPI_Decide | 170 |
| 9.38.1 | Function invocation scheme | 170 |
| 9.38.2 | Constraints on the parameters | 171 |
| 9.38.3 | Function invocation input | 171 |
| 9.38.4 | Function invocation output | 171 |
| 9.38.5 | Bound activity invocation input | 172 |
| 9.38.6 | Bound activity invocation output | 172 |
| 9.39 | BioAPI_Fuse | 172 |
| 9.39.1 | Function invocation scheme | 172 |
| 9.39.2 | Constraints on the parameters | 173 |
| 9.39.3 | Function invocation input | 173 |
| 9.39.4 | Function invocation output | 173 |
| 9.39.5 | Bound activity invocation input | 173 |
| 9.39.6 | Bound activity invocation output | 174 |
| 9.40 | BioAPI_Enroll | 174 |
| 9.40.1 | Function invocation scheme | 174 |
| 9.40.2 | Constraints on the parameters | 175 |
| 9.40.3 | Function invocation input | 176 |
| 9.40.4 | Function invocation output | 176 |
| 9.40.5 | Bound activity invocation input | 177 |
| 9.40.6 | Bound activity invocation output | 177 |
| 9.41 | BioAPI_Verify | 177 |
| 9.41.1 | Function invocation scheme | 177 |
| 9.41.2 | Constraints on the parameters | 178 |
| 9.41.3 | Function invocation input | 179 |
| 9.41.4 | Function invocation output | 179 |
| 9.41.5 | Bound activity invocation input | 180 |
| 9.41.6 | Bound activity invocation output | 181 |
| 9.42 | BioAPI_Identify | 181 |
| 9.42.1 | Function invocation scheme | 181 |
| 9.42.2 | Constraints on the parameters | 182 |
| 9.42.3 | Function invocation input | 183 |
| 9.42.4 | Function invocation output | 183 |
| 9.42.5 | Bound activity invocation input | 184 |
| 9.42.6 | Bound activity invocation output | 184 |
| 9.43 | BioAPI_Import | 184 |
| 9.43.1 | Function invocation scheme | 184 |
| 9.43.2 | Constraints on the parameters | 185 |
| 9.43.3 | Function invocation input | 185 |
| 9.43.4 | Function invocation output | 186 |
| 9.43.5 | Bound activity invocation input | 186 |
| 9.43.6 | Bound activity invocation output | 187 |
| 9.44 | BioAPI_Export | 187 |
| 9.44.1 | Function invocation scheme | 187 |
| 9.44.2 | Constraints on the parameters | 187 |
| 9.44.3 | Function invocation input | 188 |
| 9.44.4 | Function invocation output | 188 |
| 9.44.5 | Bound activity invocation input | 188 |
| 9.44.6 | Bound activity invocation output | 189 |
| 9.45 | BioAPI_PresetIdentifyPopulation | 189 |
| 9.45.1 | Function invocation scheme | 189 |

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| | | |
|--------|---------------------------------------|-----|
| 9.45.2 | Constraints on the parameters..... | 189 |
| 9.45.3 | Function invocation input..... | 189 |
| 9.45.4 | Function invocation output..... | 190 |
| 9.45.5 | Bound activity invocation input..... | 190 |
| 9.45.6 | Bound activity invocation output..... | 190 |
| 9.46 | BioAPI_Transform..... | 190 |
| 9.46.1 | Function invocation scheme..... | 190 |
| 9.46.2 | Constraints on the parameters..... | 191 |
| 9.46.3 | Function invocation input..... | 191 |
| 9.46.4 | Function invocation output..... | 192 |
| 9.46.5 | Bound activity invocation input..... | 192 |
| 9.46.6 | Bound activity invocation output..... | 192 |
| 9.47 | BioAPI_DbOpen..... | 192 |
| 9.47.1 | Function invocation scheme..... | 192 |
| 9.47.2 | Constraints on the parameters..... | 193 |
| 9.47.3 | Function invocation input..... | 193 |
| 9.47.4 | Function invocation output..... | 194 |
| 9.47.5 | Bound activity invocation input..... | 194 |
| 9.47.6 | Bound activity invocation output..... | 194 |
| 9.48 | BioAPI_DbClose..... | 195 |
| 9.48.1 | Function invocation scheme..... | 195 |
| 9.48.2 | Constraints on the parameters..... | 195 |
| 9.48.3 | Function invocation input..... | 195 |
| 9.48.4 | Function invocation output..... | 195 |
| 9.48.5 | Bound activity invocation input..... | 195 |
| 9.48.6 | Bound activity invocation output..... | 196 |
| 9.49 | BioAPI_DbCreate..... | 196 |
| 9.49.1 | Function invocation scheme..... | 196 |
| 9.49.2 | Constraints on the parameters..... | 196 |
| 9.49.3 | Function invocation input..... | 197 |
| 9.49.4 | Function invocation output..... | 197 |
| 9.49.5 | Bound activity invocation input..... | 197 |
| 9.49.6 | Bound activity invocation output..... | 197 |
| 9.50 | BioAPI_DbDelete..... | 198 |
| 9.50.1 | Function invocation scheme..... | 198 |
| 9.50.2 | Constraints on the parameters..... | 198 |
| 9.50.3 | Function invocation input..... | 198 |
| 9.50.4 | Function invocation output..... | 198 |
| 9.50.5 | Bound activity invocation input..... | 198 |
| 9.50.6 | Bound activity invocation output..... | 199 |
| 9.51 | BioAPI_DbSetMarker..... | 199 |
| 9.51.1 | Function invocation scheme..... | 199 |
| 9.51.2 | Constraints on the parameters..... | 199 |
| 9.51.3 | Function invocation input..... | 200 |
| 9.51.4 | Function invocation output..... | 200 |
| 9.51.5 | Bound activity invocation input..... | 200 |
| 9.51.6 | Bound activity invocation output..... | 200 |
| 9.52 | BioAPI_DbFreeMarker..... | 200 |
| 9.52.1 | Function invocation scheme..... | 200 |
| 9.52.2 | Constraints on the parameters..... | 201 |
| 9.52.3 | Function invocation input..... | 201 |
| 9.52.4 | Function invocation output..... | 201 |
| 9.52.5 | Bound activity invocation input..... | 201 |
| 9.52.6 | Bound activity invocation output..... | 201 |
| 9.53 | BioAPI_DbStoreBIR..... | 202 |
| 9.53.1 | Function invocation scheme..... | 202 |
| 9.53.2 | Constraints on the parameters..... | 202 |
| 9.53.3 | Function invocation input..... | 203 |

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| | | |
|--------|---------------------------------------|-----|
| 9.53.4 | Function invocation output..... | 203 |
| 9.53.5 | Bound activity invocation input..... | 203 |
| 9.53.6 | Bound activity invocation output..... | 203 |
| 9.54 | BioAPI_DbGetBIR..... | 204 |
| 9.54.1 | Function invocation scheme..... | 204 |
| 9.54.2 | Constraints on the parameters..... | 204 |
| 9.54.3 | Function invocation input..... | 205 |
| 9.54.4 | Function invocation output..... | 205 |
| 9.54.5 | Bound activity invocation input..... | 205 |
| 9.54.6 | Bound activity invocation output..... | 206 |
| 9.55 | BioAPI_DbGetNextBIR..... | 206 |
| 9.55.1 | Function invocation scheme..... | 206 |
| 9.55.2 | Constraints on the parameters..... | 206 |
| 9.55.3 | Function invocation input..... | 207 |
| 9.55.4 | Function invocation output..... | 207 |
| 9.55.5 | Bound activity invocation input..... | 207 |
| 9.55.6 | Bound activity invocation output..... | 208 |
| 9.56 | BioAPI_DbDeleteBIR..... | 208 |
| 9.56.1 | Function invocation scheme..... | 208 |
| 9.56.2 | Constraints on the parameters..... | 208 |
| 9.56.3 | Function invocation input..... | 209 |
| 9.56.4 | Function invocation output..... | 209 |
| 9.56.5 | Bound activity invocation input..... | 209 |
| 9.56.6 | Bound activity invocation output..... | 209 |
| 9.57 | BioAPI_SetPowerMode..... | 209 |
| 9.57.1 | Function invocation scheme..... | 209 |
| 9.57.2 | Constraints on the parameters..... | 210 |
| 9.57.3 | Function invocation input..... | 210 |
| 9.57.4 | Function invocation output..... | 210 |
| 9.57.5 | Bound activity invocation input..... | 210 |
| 9.57.6 | Bound activity invocation output..... | 210 |
| 9.58 | BioAPI_SetIndicatorStatus..... | 211 |
| 9.58.1 | Function invocation scheme..... | 211 |
| 9.58.2 | Constraints on the parameters..... | 211 |
| 9.58.3 | Function invocation input..... | 211 |
| 9.58.4 | Function invocation output..... | 211 |
| 9.58.5 | Bound activity invocation input..... | 211 |
| 9.58.6 | Bound activity invocation output..... | 212 |
| 9.59 | BioAPI_GetIndicatorStatus..... | 212 |
| 9.59.1 | Function invocation scheme..... | 212 |
| 9.59.2 | Constraints on the parameters..... | 212 |
| 9.59.3 | Function invocation input..... | 213 |
| 9.59.4 | Function invocation output..... | 213 |
| 9.59.5 | Bound activity invocation input..... | 213 |
| 9.59.6 | Bound activity invocation output..... | 213 |
| 9.60 | BioAPI_CalibrateSensor..... | 213 |
| 9.60.1 | Function invocation scheme..... | 213 |
| 9.60.2 | Constraints on the parameters..... | 214 |
| 9.60.3 | Function invocation input..... | 214 |
| 9.60.4 | Function invocation output..... | 214 |
| 9.60.5 | Bound activity invocation input..... | 214 |
| 9.60.6 | Bound activity invocation output..... | 214 |
| 9.61 | BioAPI_Cancel..... | 215 |
| 9.61.1 | Function invocation scheme..... | 215 |
| 9.61.2 | Constraints on the parameters..... | 215 |
| 9.61.3 | Function invocation input..... | 215 |
| 9.61.4 | Function invocation output..... | 215 |
| 9.61.5 | Bound activity invocation input..... | 215 |

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| | | | |
|------|--------|---------------------------------------|-----|
| | 9.61.6 | Bound activity invocation output..... | 215 |
| 9.62 | | BioAPI_Free..... | 216 |
| | 9.62.1 | Function invocation scheme..... | 216 |
| | 9.62.2 | Constraints on the parameters..... | 216 |
| | 9.62.3 | Function invocation input..... | 216 |
| | 9.62.4 | Function invocation output..... | 216 |
| | 9.62.5 | Bound activity invocation input..... | 216 |
| | 9.62.6 | Bound activity invocation output..... | 216 |
| 9.63 | | BioAPI_Util_InstallBSP..... | 217 |
| | 9.63.1 | Function invocation scheme..... | 217 |
| | 9.63.2 | Constraints on the parameters..... | 217 |
| | 9.63.3 | Function invocation input..... | 218 |
| | 9.63.4 | Function invocation output..... | 218 |
| | 9.63.5 | Bound activity invocation input..... | 218 |
| | 9.63.6 | Bound activity invocation output..... | 218 |
| 9.64 | | BioAPI_Util_InstallBFP..... | 219 |
| | 9.64.1 | Function invocation scheme..... | 219 |
| | 9.64.2 | Constraints on the parameters..... | 219 |
| | 9.64.3 | Function invocation input..... | 220 |
| | 9.64.4 | Function invocation output..... | 220 |
| | 9.64.5 | Bound activity invocation input..... | 220 |
| | 9.64.6 | Bound activity invocation output..... | 220 |
| 9.65 | | BioSPI_BSPLoad..... | 220 |
| | 9.65.1 | Function invocation scheme..... | 220 |
| | 9.65.2 | Constraints on the parameters..... | 221 |
| | 9.65.3 | Function invocation input..... | 221 |
| | 9.65.4 | Function invocation output..... | 222 |
| | 9.65.5 | Bound activity invocation input..... | 222 |
| | 9.65.6 | Bound activity invocation output..... | 222 |
| | 9.65.7 | Default output..... | 222 |
| 9.66 | | BioSPI_BSPUnload..... | 222 |
| | 9.66.1 | Function invocation scheme..... | 222 |
| | 9.66.2 | Constraints on the parameters..... | 222 |
| | 9.66.3 | Function invocation input..... | 223 |
| | 9.66.4 | Function invocation output..... | 223 |
| | 9.66.5 | Bound activity invocation input..... | 223 |
| | 9.66.6 | Bound activity invocation output..... | 223 |
| | 9.66.7 | Default output..... | 223 |
| 9.67 | | BioSPI_BSPAttach..... | 223 |
| | 9.67.1 | Function invocation scheme..... | 223 |
| | 9.67.2 | Constraints on the parameters..... | 224 |
| | 9.67.3 | Function invocation input..... | 224 |
| | 9.67.4 | Function invocation output..... | 225 |
| | 9.67.5 | Bound activity invocation input..... | 225 |
| | 9.67.6 | Bound activity invocation output..... | 225 |
| | 9.67.7 | Default output..... | 225 |
| 9.68 | | BioSPI_BSPDetach..... | 225 |
| | 9.68.1 | Function invocation scheme..... | 225 |
| | 9.68.2 | Constraints on the parameters..... | 226 |
| | 9.68.3 | Function invocation input..... | 226 |
| | 9.68.4 | Function invocation output..... | 226 |
| | 9.68.5 | Bound activity invocation input..... | 226 |
| | 9.68.6 | Bound activity invocation output..... | 226 |
| | 9.68.7 | Default output..... | 226 |
| 9.69 | | BioSPI_QueryUnits..... | 226 |
| | 9.69.1 | Function invocation scheme..... | 226 |
| | 9.69.2 | Bound activity invocation output..... | 227 |
| | 9.69.3 | Default output..... | 228 |

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| | | |
|------|---|-----|
| 9.70 | BioSPI_QueryBFPs | 228 |
| | 9.70.1 Function invocation scheme | 228 |
| | 9.70.2 Bound activity invocation output | 229 |
| | 9.70.3 Default output | 229 |
| 9.71 | BioSPI_ControlUnit | 229 |
| | 9.71.1 Function invocation scheme | 229 |
| | 9.71.2 Bound activity invocation output | 230 |
| | 9.71.3 Default output | 230 |
| 9.72 | BioSPI_SetConfiguration | 231 |
| | 9.72.1 Function invocation scheme | 231 |
| | 9.72.2 Bound activity invocation output | 231 |
| | 9.72.3 Default output | 231 |
| 9.73 | BioSPI_FreeBIRHandle | 232 |
| | 9.73.1 Function invocation scheme | 232 |
| | 9.73.2 Bound activity invocation output | 232 |
| | 9.73.3 Default output | 232 |
| 9.74 | BioSPI_GetBIRFromHandle | 232 |
| | 9.74.1 Function invocation scheme | 232 |
| | 9.74.2 Bound activity invocation output | 233 |
| | 9.74.3 Default output | 233 |
| 9.75 | BioSPI_GetHeaderFromHandle | 233 |
| | 9.75.1 Function invocation scheme | 233 |
| | 9.75.2 Bound activity invocation output | 234 |
| | 9.75.3 Default output | 234 |
| 9.76 | BioSPI_SubscribeToGUIEvents | 234 |
| | 9.76.1 Function invocation scheme | 234 |
| | 9.76.2 Bound activity invocation output | 235 |
| | 9.76.3 Default output | 235 |
| 9.77 | BioSPI_UnsubscribeFromGUIEvents | 235 |
| | 9.77.1 Function invocation scheme | 235 |
| | 9.77.2 Bound activity invocation output | 235 |
| | 9.77.3 Default output | 236 |
| 9.78 | BioSPI_EnableEvents | 236 |
| | 9.78.1 Function invocation scheme | 236 |
| | 9.78.2 Bound activity invocation output | 236 |
| | 9.78.3 Default output | 236 |
| 9.79 | BioSPI_SetGUICallbacks | 237 |
| | 9.79.1 Function invocation scheme | 237 |
| | 9.79.2 Bound activity invocation output | 237 |
| | 9.79.3 Default output | 237 |
| 9.80 | BioSPI_Capture | 238 |
| | 9.80.1 Function invocation scheme | 238 |
| | 9.80.2 Bound activity invocation output | 238 |
| | 9.80.3 Default output | 239 |
| 9.81 | BioSPI_CreateTemplate | 239 |
| | 9.81.1 Function invocation scheme | 239 |
| | 9.81.2 Bound activity invocation output | 240 |
| | 9.81.3 Default output | 240 |
| 9.82 | BioSPI_Process | 241 |
| | 9.82.1 Function invocation scheme | 241 |
| | 9.82.2 Bound activity invocation output | 241 |
| | 9.82.3 Default output | 242 |
| 9.83 | BioSPI_ProcessUsingAuxBIRs | 242 |
| | 9.83.1 Function invocation scheme | 242 |
| | 9.83.2 Bound activity invocation output | 243 |
| | 9.83.3 Default output | 243 |
| 9.84 | BioSPI_VerifyMatch | 243 |
| | 9.84.1 Function invocation scheme | 243 |

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| | | | |
|------|--------|---------------------------------------|-----|
| | 9.84.2 | Bound activity invocation output..... | 244 |
| | 9.84.3 | Default output..... | 245 |
| 9.85 | | BioSPI_VerifyMatchUsingAuxBIRs..... | 245 |
| | 9.85.1 | Function invocation scheme..... | 245 |
| | 9.85.2 | Bound activity invocation output..... | 246 |
| | 9.85.3 | Default output..... | 247 |
| 9.86 | | BioSPI_IdentifyMatch..... | 247 |
| | 9.86.1 | Function invocation scheme..... | 247 |
| | 9.86.2 | Bound activity invocation output..... | 248 |
| | 9.86.3 | Default output..... | 249 |
| 9.87 | | BioSPI_Decide..... | 249 |
| | 9.87.1 | Function invocation scheme..... | 249 |
| | 9.87.2 | Bound activity invocation output..... | 250 |
| | 9.87.3 | Default output..... | 250 |
| 9.88 | | BioSPI_Fuse..... | 251 |
| | 9.88.1 | Function invocation scheme..... | 251 |
| | 9.88.2 | Bound activity invocation output..... | 251 |
| | 9.88.3 | Default output..... | 252 |
| 9.89 | | BioSPI_Enroll..... | 252 |
| | 9.89.1 | Function invocation scheme..... | 252 |
| | 9.89.2 | Bound activity invocation output..... | 253 |
| | 9.89.3 | Default output..... | 254 |
| 9.90 | | BioSPI_Verify..... | 254 |
| | 9.90.1 | Function invocation scheme..... | 254 |
| | 9.90.2 | Bound activity invocation output..... | 255 |
| | 9.90.3 | Default output..... | 256 |
| 9.91 | | BioSPI_Identify..... | 256 |
| | 9.91.1 | Function invocation scheme..... | 256 |
| | 9.91.2 | Bound activity invocation output..... | 257 |
| | 9.91.3 | Default output..... | 258 |
| 9.92 | | BioSPI_Import..... | 258 |
| | 9.92.1 | Function invocation scheme..... | 258 |
| | 9.92.2 | Bound activity invocation output..... | 259 |
| | 9.92.3 | Default output..... | 259 |
| 9.93 | | BioSPI_Export..... | 260 |
| | 9.93.1 | Function invocation scheme..... | 260 |
| | 9.93.2 | Bound activity invocation output..... | 260 |
| | 9.93.3 | Default output..... | 261 |
| 9.94 | | BioSPI_PresetIdentifyPopulation..... | 261 |
| | 9.94.1 | Function invocation scheme..... | 261 |
| | 9.94.2 | Bound activity invocation output..... | 261 |
| | 9.94.3 | Default output..... | 262 |
| 9.95 | | BioSPI_Transform..... | 262 |
| | 9.95.1 | Function invocation scheme..... | 262 |
| | 9.95.2 | Bound activity invocation output..... | 262 |
| | 9.95.3 | Default output..... | 263 |
| 9.96 | | BioSPI_DbOpen..... | 263 |
| | 9.96.1 | Function invocation scheme..... | 263 |
| | 9.96.2 | Bound activity invocation output..... | 264 |
| | 9.96.3 | Default output..... | 264 |
| 9.97 | | BioSPI_DbClose..... | 265 |
| | 9.97.1 | Function invocation scheme..... | 265 |
| | 9.97.2 | Bound activity invocation output..... | 265 |
| | 9.97.3 | Default output..... | 265 |
| 9.98 | | BioSPI_DbCreate..... | 265 |
| | 9.98.1 | Function invocation scheme..... | 265 |
| | 9.98.2 | Bound activity invocation output..... | 266 |
| | 9.98.3 | Default output..... | 266 |

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| | | |
|-------|--|-----|
| 9.99 | BioSPI_DbDelete | 267 |
| | 9.99.1 Function invocation scheme | 267 |
| | 9.99.2 Bound activity invocation output | 267 |
| | 9.99.3 Default output | 267 |
| 9.100 | BioSPI_DbSetMarker | 267 |
| | 9.100.1 Function invocation scheme | 267 |
| | 9.100.2 Bound activity invocation output | 268 |
| | 9.100.3 Default output | 268 |
| 9.101 | BioSPI_DbFreeMarker | 268 |
| | 9.101.1 Function invocation scheme | 268 |
| | 9.101.2 Bound activity invocation output | 269 |
| | 9.101.3 Default output | 269 |
| 9.102 | BioSPI_DbStoreBIR | 269 |
| | 9.102.1 Function invocation scheme | 269 |
| | 9.102.2 Bound activity invocation output | 269 |
| | 9.102.3 Default output | 270 |
| 9.103 | BioSPI_DbGetBIR | 270 |
| | 9.103.1 Function invocation scheme | 270 |
| | 9.103.2 Bound activity invocation output | 271 |
| | 9.103.3 Default output | 271 |
| 9.104 | BioSPI_DbGetNextBIR | 271 |
| | 9.104.1 Function invocation scheme | 271 |
| | 9.104.2 Bound activity invocation output | 272 |
| | 9.104.3 Default output | 272 |
| 9.105 | BioSPI_DbDeleteBIR | 273 |
| | 9.105.1 Function invocation scheme | 273 |
| | 9.105.2 Bound activity invocation output | 273 |
| | 9.105.3 Default output | 273 |
| 9.106 | BioSPI_SetPowerMode | 273 |
| | 9.106.1 Function invocation scheme | 273 |
| | 9.106.2 Bound activity invocation output | 274 |
| | 9.106.3 Default output | 274 |
| 9.107 | BioSPI_SetIndicatorStatus | 274 |
| | 9.107.1 Function invocation scheme | 274 |
| | 9.107.2 Bound activity invocation output | 275 |
| | 9.107.3 Default output | 275 |
| 9.108 | BioSPI_GetIndicatorStatus | 275 |
| | 9.108.1 Function invocation scheme | 275 |
| | 9.108.2 Bound activity invocation output | 275 |
| | 9.108.3 Default output | 276 |
| 9.109 | BioSPI_CalibrateSensor | 276 |
| | 9.109.1 Function invocation scheme | 276 |
| | 9.109.2 Bound activity invocation output | 276 |
| | 9.109.3 Default output | 276 |
| 9.110 | BioSPI_Cancel | 277 |
| | 9.110.1 Function invocation scheme | 277 |
| | 9.110.2 Bound activity invocation output | 277 |
| | 9.110.3 Default output | 277 |
| 9.111 | BioSPI_Free | 277 |
| | 9.111.1 Function invocation scheme | 277 |
| | 9.111.2 Bound activity invocation output | 278 |
| | 9.111.3 Default output | 278 |
| 9.112 | BioAPI_GUI_STATE_EVENT_HANDLER | 278 |
| | 9.112.1 Function invocation scheme | 278 |
| | 9.112.2 Bound activity invocation output | 279 |
| | 9.112.3 Default output | 280 |
| 9.113 | BioSPI_EventHandler | 280 |
| | 9.113.1 Function invocation scheme | 280 |

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| | | |
|---------|-----------------------------------|-----|
| 9.113.2 | Constraints on the parameters | 281 |
| 9.113.3 | Function invocation input | 281 |
| 9.113.4 | Function invocation output | 281 |
| 9.113.5 | Bound activity invocation input | 282 |
| 9.113.6 | Bound activity invocation output | 282 |
| 9.113.7 | Default output | 282 |
| 9.114 | BioAPI_GUI_STATE_CALLBACK | 282 |
| 9.114.1 | Function invocation scheme | 282 |
| 9.114.2 | Constraints on the parameters | 283 |
| 9.114.3 | Bound activity invocation input | 284 |
| 9.114.4 | Bound activity invocation output | 284 |
| 9.114.5 | Default output | 284 |
| 9.115 | BioAPI_GUI_STREAMING_CALLBACK | 285 |
| 9.115.1 | Function invocation scheme | 285 |
| 9.115.2 | Constraints on the parameters | 285 |
| 9.115.3 | Bound activity invocation input | 285 |
| 9.115.4 | Bound activity invocation output | 286 |
| 9.115.5 | Default output | 286 |
| 9.116 | BioSPI_EventHandler | 286 |
| 9.116.1 | Function invocation scheme | 286 |
| 9.116.2 | Constraints on the parameters | 286 |
| 9.116.3 | Function invocation input | 287 |
| 9.116.4 | Function invocation output | 287 |
| 9.116.5 | Bound activity invocation input | 287 |
| 9.116.6 | Bound activity invocation output | 287 |
| 9.116.7 | Default output | 287 |
| 9.117 | BioSPI_GUI_STATE_CALLBACK | 288 |
| 9.117.1 | Function invocation scheme | 288 |
| 9.117.2 | Function invocation input | 288 |
| 9.117.3 | Function invocation output | 289 |
| 9.118 | BioSPI_GUI_STREAMING_CALLBACK | 289 |
| 9.118.1 | Function invocation scheme | 289 |
| 9.118.2 | Function invocation input | 290 |
| 9.118.3 | Function invocation output | 290 |
| 9.119 | BioSPI_BFP_ENUMERATION_HANDLER | 290 |
| 9.119.1 | Function invocation scheme | 290 |
| 9.119.2 | Constraints on the parameters | 291 |
| 9.119.3 | Function invocation input | 291 |
| 9.119.4 | Function invocation output | 291 |
| 9.119.5 | Bound activity invocation input | 292 |
| 9.119.6 | Bound activity invocation output | 292 |
| 9.119.7 | Default output | 292 |
| 9.120 | BioSPI_MEMORY_FREE_HANDLER | 292 |
| 9.120.1 | Function invocation scheme | 292 |
| 9.120.2 | Constraints on the parameters | 293 |
| 9.120.3 | Function invocation input | 293 |
| 9.120.4 | Function invocation output | 293 |
| 9.120.5 | Bound activity invocation input | 293 |
| 9.120.6 | Bound activity invocation output | 293 |
| 9.120.7 | Default output | 293 |
| 9.121 | BioSPI_GUI_PROGRESS_EVENT_HANDLER | 293 |
| 9.121.1 | Function invocation scheme | 293 |
| 9.121.2 | Bound activity invocation output | 294 |
| 9.121.3 | Default output | 294 |
| 9.122 | BioSPI_GUI_SELECT_EVENT_HANDLER | 295 |
| 9.122.1 | Function invocation scheme | 295 |
| 9.122.2 | Bound activity invocation output | 296 |
| 9.122.3 | Default output | 296 |

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| | | |
|--|--|------------|
| 9.123 | BioSPI_GUI_STATE_EVENT_HANDLER..... | 296 |
| 9.123.1 | Function invocation scheme..... | 296 |
| 9.123.2 | Bound activity invocation output..... | 297 |
| 9.123.3 | Default output..... | 297 |
| 10 | Built-in variables..... | 297 |
| 10.1 | Variables whose value never changes..... | 297 |
| 10.2 | Variables whose value may change..... | 309 |
| 11 | Test log..... | 310 |
| 12 | Test report..... | 312 |
| 13 | BioAPI conformance test suite..... | 313 |
| 13.1 | General concepts..... | 313 |
| 13.2 | BioAPI conformance test suite structure..... | 314 |
| Annex A (normative) XML schema of the assertion language..... | | 316 |
| Annex B (normative) ASN.1 schema of the assertion language..... | | 320 |
| Annex C (normative) XML schema for the test log..... | | 323 |
| Annex D (informative) Test method implementation guidelines..... | | 325 |
| Annex E (informative) XML diagrams of the assertion language..... | | 331 |
| Bibliography..... | | 352 |

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For an explanation on the voluntary nature of standards, the meaning of ISO specific terms and expressions related to conformity assessment, as well as information about ISO's adherence to the World Trade Organization (WTO) principles in the Technical Barriers to Trade (TBT) see the following URL: www.iso.org/iso/foreword.html.

This document was prepared by Technical Committee ISO/IEC JTC 1, *Information technology*, Subcommittee SC 37, *Biometrics*.

This second edition cancels and replaces the first edition (ISO/IEC 24709-1:2007), which has been technically revised.

A list of all parts in the ISO/IEC 24709 series can be found on the ISO website.

Introduction

This document defines a conformance testing methodology for ISO/IEC 19784-1. It specifies three conformance testing models that enable conformance testing of each of the following BioAPI components: an application, a framework, or a BSP. It also specifies an assertion language that is used for the definition of test assertions. Actual test assertions for each of the BioAPI components are defined in the subsequent parts of the ISO/IEC 24709 series.

This document also contains informative guidelines regarding general concepts related to establishing and administering a BioAPI conformance assessment and certification program. These informative guidelines identify the types of activities, responsibilities, services, and documentation recommended for conducting conformity assessment and certification of BioAPI-conformant implementations. Further, this document provides informative guidelines for establishing a complete conformity assessment methodology for BioAPI specification.

[Clause 6](#) describes the general test method and conformance testing models for BioAPI.

[Clause 7](#) defines the assertion language, based on XML, used for definition of conformance test assertion.

[Clause 8](#) defines the elements of the assertion language.

[Clause 9](#) specifies the use of the standard BioAPI interface functions of BioAPI in conformance testing.

[Clause 10](#) defines the built-in variables of the assertion language.

[Clause 11](#) defines the test log using XML syntax.

[Clause 12](#) defines the test report using XML syntax.

[Clause 13](#) describes the general concept and structure of a BioAPI conformance test suite.

[Annex A](#) defines the XML schema of the assertion language.

[Annex B](#) defines the ASN.1 schema of the assertion language.

[Annex C](#) defines the XML schema for the test log.

[Annex D](#) describes a primer of a BioAPI test method implementation, including elements of the conformance test process and description of the test categories.

[Annex E](#) provides the relationship diagrams for the assertion language.

The Bibliography references a number of standards organizations, including ISO, IEC, NIST, IEEE and other organizations, that have published a number of documents and white papers related to conformity assessment in general and conformance testing in particular.

NOTE Rather than make normative references to these documents, this document incorporates appropriate excerpts of their text, in some cases paraphrasing the text or adapting the provisions to the specific circumstances. Therefore, these documents are listed in the Bibliography or are referred in the body text explicitly as appropriate.

This is a preview of "INCITS/ISO/IEC 24709...". Click here to purchase the full version from the ANSI store.

Information technology — Conformance testing for the biometric application programming interface (BioAPI) —

Part 1: Methods and procedures

1 Scope

This document specifies the concepts, framework, test methods, and criteria required to test conformity of biometric products claiming conformance to BioAPI (see ISO/IEC 19784-1). Guidelines for specifying BioAPI conformance test suites, writing test assertions, and defining procedures to be followed during the conformance testing are provided.

This document is concerned with conformance testing of biometric products claiming conformance to BioAPI (see ISO/IEC 19784-1). It is not concerned with testing other characteristics of biometric products or other types of testing of biometric products (i.e. acceptance, performance, robustness, security, etc.) Testing by means of test methods, which are specific to particular biometric products, are not the subject of this document.

This document is applicable to the development and use of conformance test method specifications, BioAPI conformance test suites, and conformance testing programs for BioAPI-conformant products. It is intended primarily for use by testing organizations, but can be applied by developers and users of test assertions and test method implementations.

2 Normative references

The following documents are referred to in the text in such a way that some or all of their content constitutes requirements of this document. For dated references, only the edition cited applies. For undated references, the latest edition of the referenced document (including any amendments) applies.

ISO 8601, *Data elements and interchange formats — Information interchange — Representation of dates and times*

ISO/IEC 19784-1, *Information technology — Biometric application program interface — Part 1: BioAPI specification*

3 Terms and definitions

For the purposes of this document, the terms and definitions given in ISO/IEC 19784-1 and the following apply.

ISO and IEC maintain terminological databases for use in standardization at the following addresses:

- IEC Electropedia: available at <http://www.electropedia.org/>
- ISO Online browsing platform: available at <http://www.iso.org/obp>

3.1

abstract test engine

conceptual machine capable of performing conformance tests on an instance of a standard BioAPI component