

NAME

NucleicAcids

SYNOPSIS

```
use NucleicAcids;

use NucleicAcids qw(:all);
```

DESCRIPTION

NucleicAcids module provides the following functions:

GetNucleicAcidPropertiesData, GetNucleicAcidPropertiesNames, GetNucleicAcids, GetNucleicAcidsByType, IsNucleicAcid, IsNucleicAcidProperty, IsNucleicAcidType

Functions

GetNucleicAcids

```
(@Names) = GetNucleicAcids([$NameType]);
$NamesRef = GetNucleicAcids([$NameType]);
```

Returns an array or a reference to an array containing names of nucleic acids as a code or nucleic acid name controlled by optional parameter *NameType*. By default, nucleic acids names are returned as the code. Possible values for *NameType*: *Code* or *Name*.

GetNucleicAcidsByType

```
(@Names) = GetNucleicAcidsByType([$Type, $NameType]);
$NamesRef = GetNucleicAcidsByType([$Type, $NameType]);
```

Returns an array or a reference to an array containing names of nucleic acids specified by parameter *Type* as a code or name controlled by optional parameter *NameType*. Default values for *Type*: *Nucleoside*. Default value for *NameType*: *Code*. Possible values for *Type*: *Nucleobase*, *Nucleoside*, *Deoxynucleoside*, *Nucleotide*, *Deoxynucleotide*. Possible values for *NameType*: *Code* or *Name*.

GetNucleicAcidPropertiesData

```
$DataHashRef = GetNucleicAcidPropertiesData($NucleicAcidID);
```

Returns a reference to hash containing property names and values for a specified *NucleicAcidID*.

GetNucleicAcidPropertyName

```
$Value = GetNucleicAcid<PropertyName>($NucleicAcidID);
```

Returns nucleic acid property value for a specified *NucleicAcidID*. This function is implemented on-the-fly using Perl's AUTOLOAD functionality.

GetNucleicAcidPropertiesNames

```
@Names = GetNucleicAcidPropertiesNames([$Mode]);
$NamesRef = GetNucleicAcidPropertiesNames([$Mode]);
```

Returns an array or a reference to an array containing names of properties for nucleic acids. Order of nucleic acids properties is controlled by optional parameter *Mode*. Possible values for *Mode*: *Alphabetical* or *ByGroup*; Default: *ByGroup*.

IsNucleicAcid

```
$Status = IsNucleicAcid($NucleicAcidID);
```

Returns 1 or 0 based on whether it's a known nucleic acid ID.

IsNucleicAcidProperty

```
$Status = IsNucleicAcid($PropertyName);
```

Returns 1 or 0 based on whether it's a known nucleic acid property name.

IsNucleicAcidType

```
$Status = IsNucleicAcidType();
```

Returns 1 or 0 based on whether it's a known nucleic acid type.

AUTHOR

Manish Sud <msud@san.rr.com>

SEE ALSO

AminoAcids.pm, PeriodicTable.pm

COPYRIGHT

Copyright (C) 2024 Manish Sud. All rights reserved.

This file is part of MayaChemTools.

MayaChemTools is free software; you can redistribute it and/or modify it under the terms of the GNU Lesser General Public License as published by the Free Software Foundation; either version 3 of the License, or (at your option) any later version.