

## NAME

NucleicAcids

## SYNOPSIS

```
use NucleicAcids;

use NucleicAcids qw(:all);
```

## DESCRIPTION

NucleicAcids module the 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.

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SEE ALSO

AminoAcids.pm, PeriodicTable.pm

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