

***AKos***  
***Consulting & Solutions GmbH***



CWM Global Search – Utilizing Marvin in Rich Internet Applications using Silverlight

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## CWM Global Search – Utilizing Marvin in Rich Internet Applications using Silverlight

- What is a Rich Internet Application (RIA) ?  
„ A **Rich Internet Application (RIA)** is a [Web application](#) that has many of the characteristics of [desktop applications](#) ..” (Wikipedia)
- What makes a RIA “rich” compared with a HTML based Web Interface ?
  - “Rich controls” (e.g. Professional data grids)
  - Drag-and-Drop
  - ...
  - Higher interactivity
- A RIA is the optimal frontend for a SOA (Service Oriented Architecture) solution

## CWM Global Search – Utilizing Marvin in Rich Internet Applications using Silverlight

- What is Silverlight ?
  - A Microsoft application framework to build Rich Internet Applications (RIA)
  - Silverlight applications run in a Webbrowser on both Windows and Mac
  - It is a Plug-In
  - Current version number is 4.0

## CWM Global Search – Utilizing Marvin in Rich Internet Applications using Silverlight

- CWM Global Search – An example of a RIA build with Silverlight.
- What is CWM Global Search doing ?
  - It is a true meta search engine for free chemistry databases on the Internet
  - Currently searches over up to 50 internet datasources
  - One can search using structure, CAS Registry number(s) or free text (e.g. Names)
  - Results are Hyperlinks

QuickSearch QuickSearch Results Global Search Global Search Results

Clear Form Clear Structure Read Mol File Read SDF File Read RXN File Read RD File Save Query Load Query Home | Feedback | Impressum ?

CAS Registry number

- 10-29-7
- 632-85-9

+ Add   ✂ Edit   ✖ Remove

Select/Deselect All

Double click inside box below to open or right click inside box below and use

Synonym name or free text

- 5,7-dihydroxy-8-methoxy-2-phenylchromen-4-one
- Wogonin

+ Add   ✂ Edit   ✖ Remove

Major datasources

- Info  Google
- Info  PubChem
- Info  ChemSpider
- Info  Chemical Structure Lookup Service
- Info  eMolecules
- Info  NIST Webbook
- Info  NCI Database

Specialized datasources

- Info  Wikipedia
- Info  SCIRUS
- Info  ChemAxon Chemicalize Search
- Info  ChemicalDB

Options

Structure Search

- Include isomers
- Include Substructures
- Include similar compounds

Similarity coefficient (1-100)

Predefined profiles

- Search in chemistry datasources
- Search in structure searchable datasources
- Find physical properties
- Find suppliers
- Find safety information
- Find spectra
- Find literature
- Find Open Access articles
- Find drug information

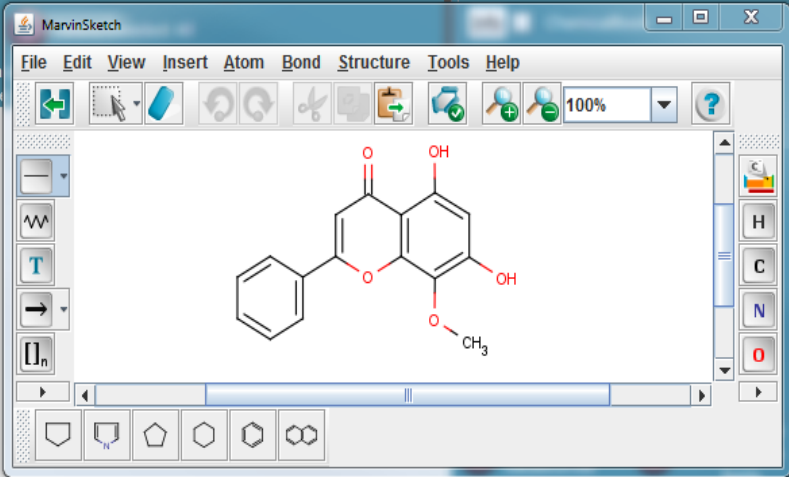
New selection


My profiles

Save  Select  Remove

MarvinSketch


File Edit View Insert Atom Bond Structure Tools Help



 Start Global Search

QuickSearch QuickSearch Results Global Search Global Search Results

Save Result Load Result

Home | Feedback | Impressum 

GlobalSearchResultsPage.xaml?title=634404493729614381

Identifier	Number of links	Status	Message
RECORD_1	14	OK	Click leftmost button to expand/collapse results <a href="#">chemicalize &gt;</a>

<input type="checkbox"/> Datasource	Result	Search type	Query	Errors
<input type="checkbox"/> ChemAxon Chemicalize Search	<a href="#">1 structure found</a>	FULLSTRUCTURE		
<input type="checkbox"/> ChemAxon Chemicalize Search	<a href="#">28 structures found</a>	SUBSTRUCTURE		
<input type="checkbox"/> GOOGLE	<a href="#">4 results</a>	FULLSTRUCTURE		
<input type="checkbox"/> GOOGLE	<a href="#">9 results</a>	FULLSTRUCTURE		
<input type="checkbox"/> GOOGLE	<a href="#">About 27 results</a>	FULLSTRUCTURE		
<input type="checkbox"/> GOOGLE	<a href="#">About 84 results</a>	FULLSTRUCTURE		
<input type="checkbox"/> WIKIPEDIA	<a href="#">Results 1-3 of 3</a>	FULLSTRUCTURE		
<input type="checkbox"/> GOOGLE	<a href="#">About 20,100 results</a>	CASNUMBER	632-85-9	
<input type="checkbox"/> GOOGLE	<a href="#">About 41,700,000 results</a>	CASNUMBER	10-29-7	
<input type="checkbox"/> WIKIPEDIA	<a href="#">Result 1 of 1</a>	CASNUMBER	632-85-9	
<input type="checkbox"/> GOOGLE	<a href="#">About 29,300 results</a>	SYNONYMNAME	Wogonin	
<input type="checkbox"/> GOOGLE	<a href="#">About 798 results</a>	SYNONYMNAME	5,7-dihydroxy-8-methoxy-2-phenylchromen-4-one	
<input type="checkbox"/> WIKIPEDIA	<a href="#">Result 1 of 1</a>	SYNONYMNAME	5,7-dihydroxy-8-methoxy-2-phenylchromen-4-one	
<input type="checkbox"/> WIKIPEDIA	<a href="#">Results 1-10 of 10</a>	SYNONYMNAME	Wogonin	

## CWM Global Search – Utilizing Marvin in Rich Internet Applications using Silverlight

- How to integrate ChemAxon Marvin in a Silverlight application ?

The basic requirements are met:

- Silverlight allows to render HTML with embedded Applets (such as Marvin)
- Silverlight can call Javascript functions
- Javascript functions can call the Silverlight application

# CWM Global Search – Utilizing Marvin in Rich Internet Applications using Silverlight

- Step 1
  - Add Marvin to Silverlight.js file

```
////////////////////////////////////  
//  
// buildHTML:  
//  
// create HTML that instantiates the control  
//  
////////////////////////////////////  
Silverlight.buildHTML = function (slProperties) {  
...  
htmlBuilder.push('<applet CODEBASE = "" code = "chemaxon.marvin.applet.JMViewLaunch" name =  
„MarvinView" id = „MyMarvinPage" ... archive = "appletlaunch.jar">');  
.....
```



## CWM Global Search – Utilizing Marvin in Rich Internet Applications using Silverlight

- Step 2

- Implement a handler in the Silverlight application to handle the position/size of the applet

```
HtmlDocument doc = HtmlPage.Document;  
HtmlElement mymarvinviewapplet = doc.GetElementById("MyMarvinPage");  
mymarvinviewapplet.SetStyleAttribute("position", "absolute");  
mymarvinviewapplet.SetStyleAttribute("left", "100px");  
mymarvinviewapplet.SetStyleAttribute("right", "100px");  
....
```

## CWM Global Search –

### Utilizing Marvin in Rich Internet Applications using Silverlight

- Step 3
  - Set Windowless mode parameter of the Silverlight Plug-in object to true

```
////////////////////////////////////  
//  
// buildHTML:  
//  
// create HTML that instantiates the control  
//  
////////////////////////////////////  
Silverlight.buildHTML = function (slProperties) {  
...  
htmlBuilder.push('<object type=\"application/x-silverlight\" data=\"data:application/x-silverlight,\"');  
if (navigator.platform == \"Win32\") {  
    htmlBuilder.push('<param name=\"Windowless\" value=\"true\" />');  
}  
.....  
htmlBuilder.push('<\/object>');
```

## CWM Global Search – Utilizing Marvin in Rich Internet Applications using Silverlight

### Calling Marvin from Silverlight application

- Define Javascript function in Silverlight start page

```
function MarvinGetMolStringMyMarvinView() {  
  
    var applet = document.getElementById("MyMarvinPage");  
  
    var molfile = applet.getM(0, "mol");  
  
    return molfile;  
}
```

- Call MarvinGetMolStringMyMarvinView from Silverlight application

```
string molfile = HtmlPage.Window.Invoke("MarvinGetMolStringMyMarvinView") as string;
```

## CWM Global Search – Utilizing Marvin in Rich Internet Applications using Silverlight

Where do I find CWM Global Search on the Internet ?

<http://cwmglobalsearch.com/gswweb>

Either request a 30 days trial key or use the free version

# *AKos*

*Consulting & Solutions GmbH*



How to find us on the internet or contact us ?

Our homepage

<http://www.akosgmbh.de>

CWM Global Search home page

<http://www.akosgmbh.de/globalsearch/index.htm>

Via eMail

[globalsearch@akosgmbh.de](mailto:globalsearch@akosgmbh.de)