

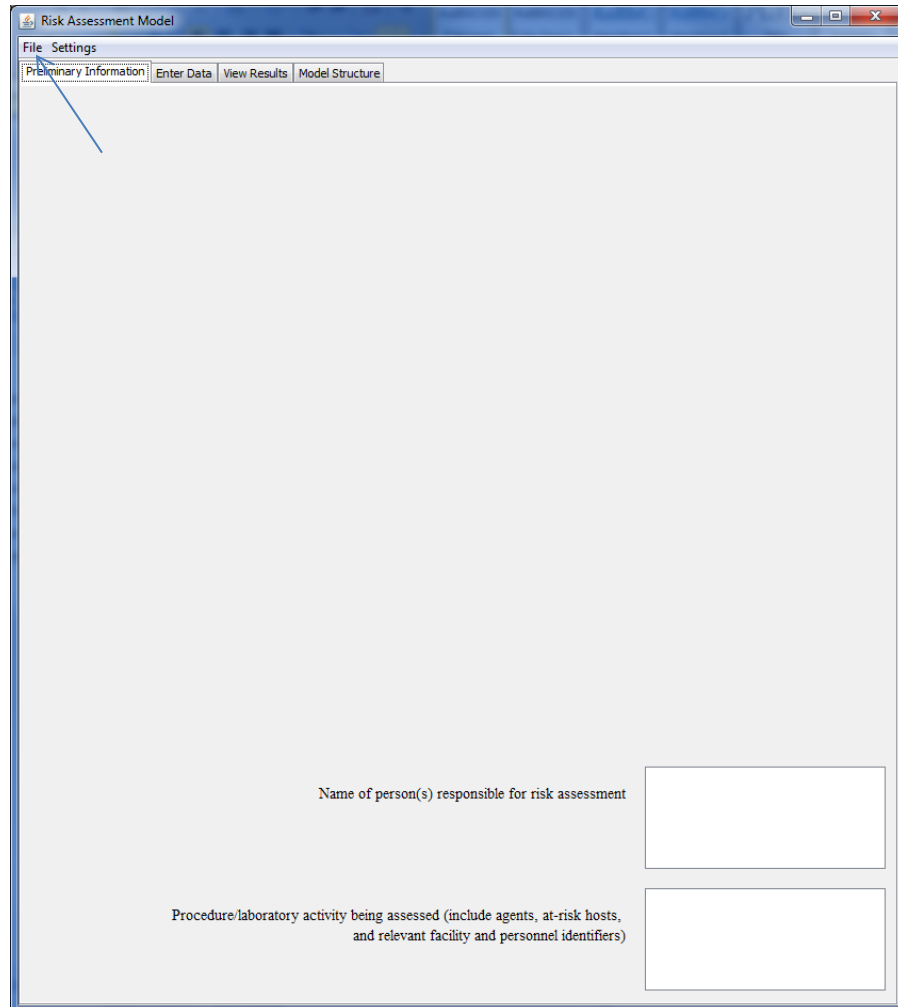


Assessment Models (BioRAMs and ChemSAM) Quick Guide

1. Run either the BioRAM-4.0.5.exe or the Bioram4.0.5.jar files. You will need Java installed on your computer to run either program.

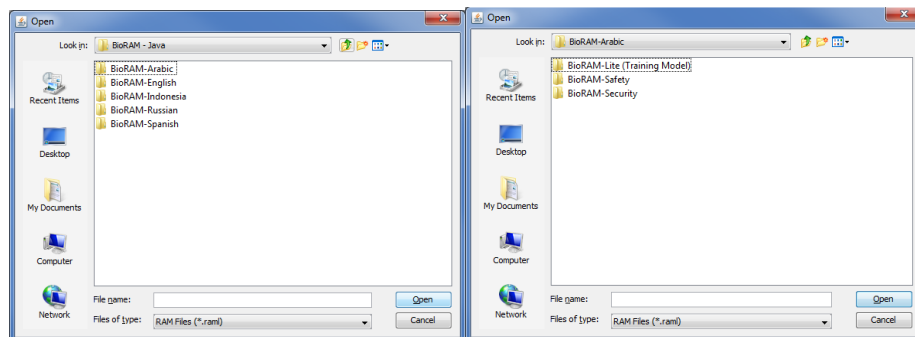
2. Under File:

a. Open a Profile



The screenshot shows the 'Risk Assessment Model' application window. It has a menu bar with 'File' and 'Settings'. Below the menu bar is a tabbed interface with four tabs: 'Preliminary Information', 'Enter Data', 'View Results', and 'Model Structure'. The 'Preliminary Information' tab is selected. The main area of the window is mostly empty, with two text input fields at the bottom right. The first field is labeled 'Name of person(s) responsible for risk assessment' and the second field is labeled 'Procedure/laboratory activity being assessed (include agents, at-risk hosts, and relevant facility and personnel identifiers)'.

b. Select the language you would like to run BioRAM and the version (BioRAM lite for training only, BioRAM-Safety for safety assessments, BioRAM-Security for security assessments or ChemSAM for chemical security assessments)




3. If you would like, you can set the menu options to other languages as well under Settings and Set Locale
4. On the Preliminary Information tab, enter details to ensure proper documentation will accompany your results

The screenshot shows a software window titled "Risk Assessment Model". The window has a menu bar with "File" and "Settings". Below the menu bar is a tabbed interface with four tabs: "Preliminary Information", "Enter Data", "View Results", and "Model Structure". The "Preliminary Information" tab is currently selected. The main content area of the window features the logo for "International BIOLOGICAL THREAT REDUCTION" at the top. Below the logo, the text "2010 Biosecurity Risk Model (BioRAM 2.0) Prototype" is displayed in a purple font. A copyright notice follows: "Copyright 2007/2009 Sandia Corporation. Under the terms of Contract DE-AC04-04AL85000, there is a non-exclusive license for use of this work by or on behalf of the U.S. Government. Export of this program may require a license from the United States Government." At the bottom of the window, there are two text input fields. The first field is labeled "Name of person(s) responsible for risk assessment" and the second field is labeled "Procedure/laboratory activity being assessed (include agents, at-risk hosts, and relevant facility and personnel identifiers)".

Risk Assessment Model

File Settings

Preliminary Information Enter Data View Results Model Structure

 **International**
BIOLOGICAL THREAT REDUCTION

2010 Biosecurity Risk Model (BioRAM 2.0)
Prototype

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the United States Government.

Name of person(s) responsible for risk assessment

Procedure/laboratory activity being assessed (include agents, at-risk hosts,
and relevant facility and personnel identifiers)

5. Select the Enter Data Tab, for BioRAM-lite and BioRAM-Safety; you will see a set of questions which can be answered using the Response field at the bottom of the page. Enter all the answers and save your responses.

The screenshot shows the 'Risk Assessment Model' application window. The 'Enter Data' tab is active, displaying the 'BioRAM Lite' module. The interface includes a 'Select a module' dropdown, a 'Saved response sets' dropdown, and 'Create new' and 'Delete selected' buttons. The main area is titled 'Likelihood of infection - Human' and contains a 'Transmissibility' section. This section explains that the criteria define the agent's ability to cause infection via droplets that have entered the upper or lower respiratory tract. It lists three questions: (1) Can this agent cause infection via inhalation in a human? (2) Is the infectious dose of this agent for this route less than 1000 or unknown? (3) Can this agent cause infection via percutaneous exposure in a human? Each question has a legend with values 4 (Preferred Route), 2 (A possible route), 1 (Unknown), and 0 (Not a route). At the bottom, there is a 'Response' input field with an 'Enter' button, a 'Response set name' input field, and a 'Save Responses' button. Two blue arrows point from the 'Response' field and the 'Save Responses' button to the corresponding fields in the instruction text above the screenshot.

Risk Assessment Model

File Settings

Preliminary Information Enter Data View Results Model Structure

Select a module

BioRAM Lite

Answer module's question set

Saved response sets Create new Delete selected

Edit Responses

Likelihood of infection - Human

Transmissibility

These criteria define the agent's ability to cause infection via droplets that have entered the upper or lower respiratory tract.

(1) Can this agent cause infection via inhalation in a human?

4 = Preferred Route

2 = A possible route

1 = Unknown

0 = Not a route

(2) Is the infectious dose of this agent for this route less than 1000 or unknown?

4 = Yes

2 = No

0 = If this is not an infectious route

This criteria defines the agent's ability to cause infection through compromised skin or direct injection into the blood stream

(3) Can this agent cause infection via percutaneous exposure in a human?

4 = Preferred Route

2 = A possible route

Response Enter

Response set name Save Responses

For BioRAM-Security and ChemSAM, if the biological or chemical agents you are assessing exist on the Agent list you can just enter data regarding the facility. Make sure to save your facility data with a unique name.

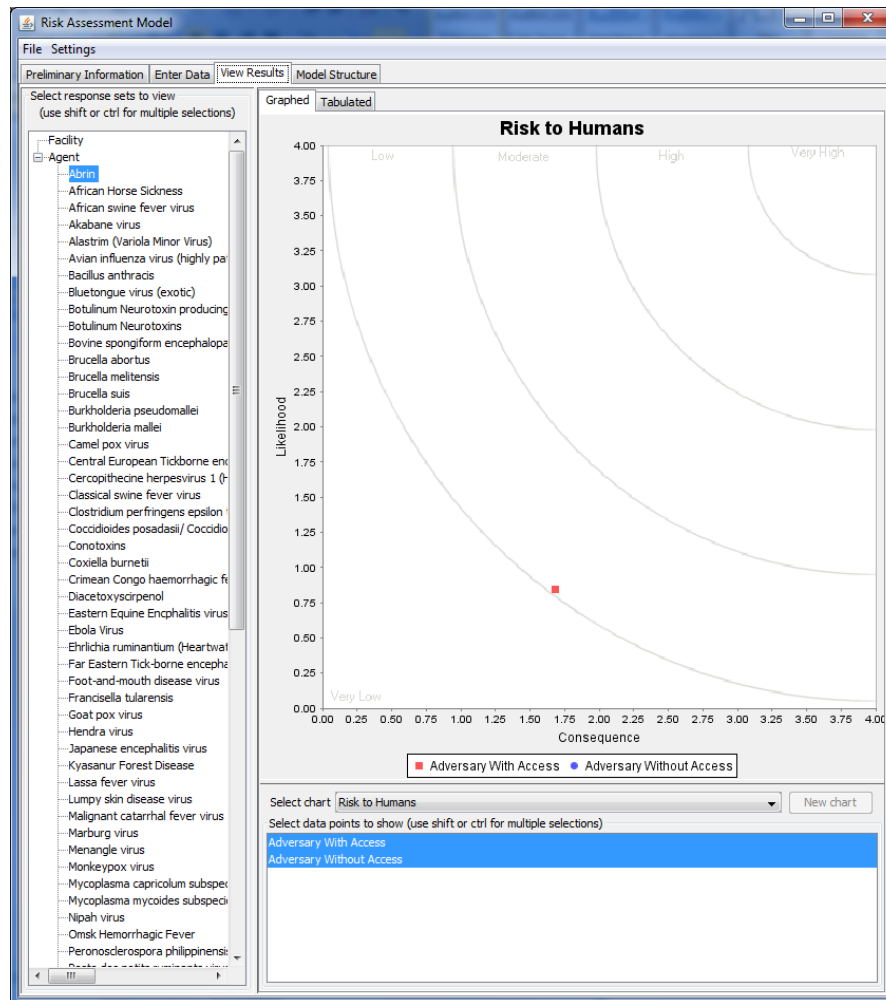
If the agents you are assessing are not included you will need to enter those as well.

The screenshot shows the 'Risk Assessment Model' application window. The 'Enter Data' tab is active, and the 'Agent' module is selected. The 'Answer module's question set' section shows a list of agents with associated likelihood values. The list is as follows:

Likelihood	Agent
4	Abrin
	African Horse Sickness
	African swine fever virus
	Alkabane virus
	Alastrim (Variola Minor Virus)
	Avian influenza virus (highly pathogenic)
	Bacillus anthracis
	Bluetongue virus (exotic)
	Botulinum Neurotoxin producing species of Clostridium (Note: it is the neurotoxin produced that)
	Botulinum Neurotoxins
	Bovine spongiform encephalopathy agent
	Brucella abortus
	Brucella melitensis
	Brucella suis
	Burkholderia pseudomallei
	Burkholderia mallei
2	Camel pox virus
	Central European Tickborne encephalitis
	Cercopithecine herpesvirus 1 (Herpes B virus)
	Classical swine fever virus
	Clostridium perfringens epsilon toxin
	Coccidioides posadasii/ Coccidioides immitis
	Conotoxins
	Coxiella burnetii
	Crimean Congo haemorrhagic fever virus
0	Diacetoxyscirpenol
	Eastern Equine Encephalitis virus
	Ebola Virus
	Ehrlichia ruminantium (Heartwater)
	Far Eastern Tick-borne encephalitis
4	Foot-and-mouth disease virus
	Francisella tularensis
	Goat pox virus
	Hendra virus
	Japanese encephalitis virus
	Kyasanur Forest Disease
	Lassa fever virus
	Lumpy skin disease virus
	Malignant catarrhal fever virus
	Marburg virus

At the bottom of the window, there is a 'Response' field, an 'Enter' button, a 'Response set name' field, and a 'Save Responses' button.

6. Under the view Results tab select the assessment, or for BioRAM-Security, the agents and facilities, you would like to view.
- a. You can select human or animal risks and limit the assessment to just those with or without access.



- b. The tabulated sub-tab will give you numerical answers which can be useful in exporting to other programs

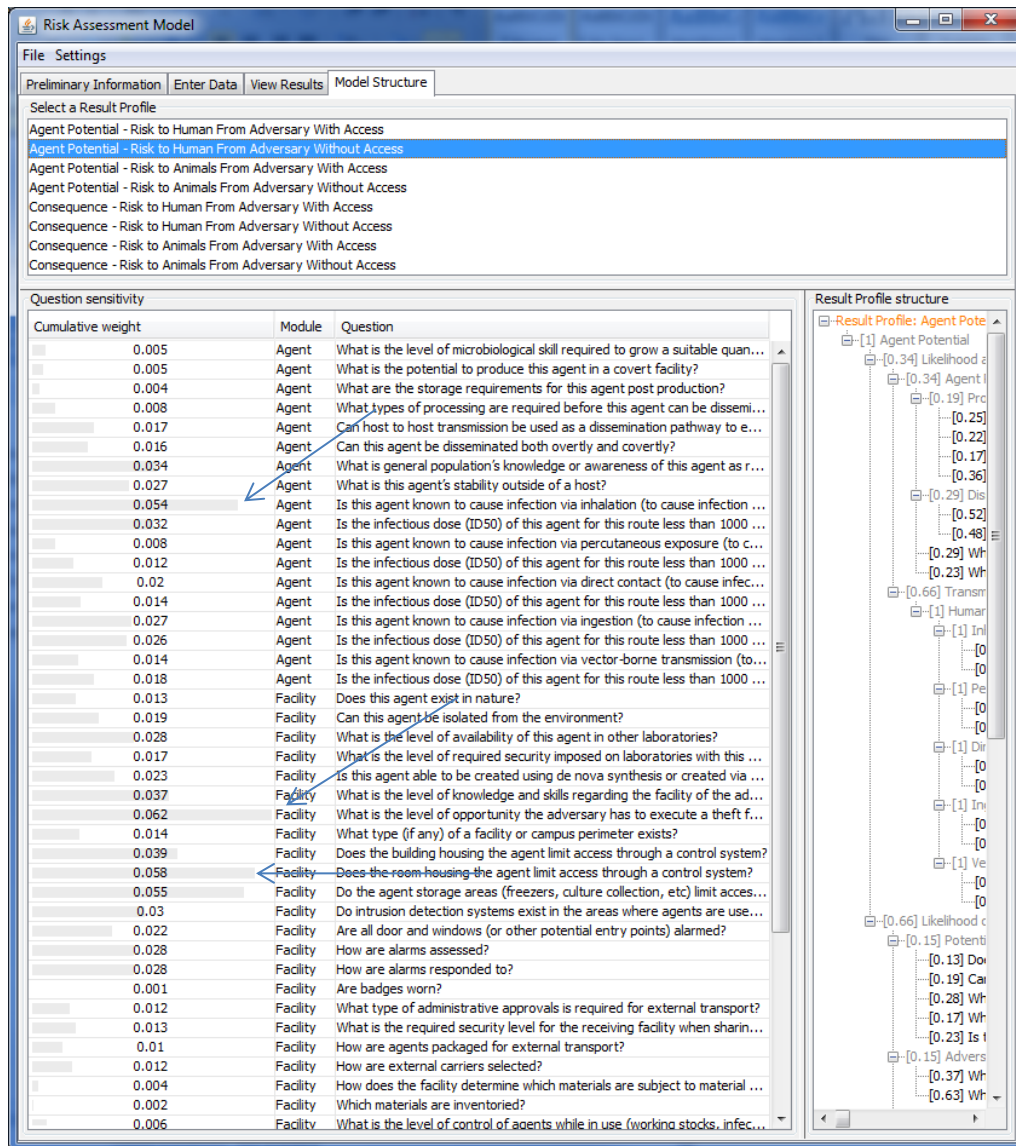
The screenshot shows the 'Risk Assessment Model' software window. The 'View Results' tab is active, and the 'Tabulated' sub-tab is selected. The main display area shows a table of results for the 'Abrin' agent. The table has columns for 'Facility', 'Agent', and several 'Agent ...' and 'Conseq...' columns. The data row for 'Abrin' shows values of 0.847 for the agent columns and 1.683 for the consequence columns. A list of agents is visible on the left, and a list of data points to show is at the bottom.

Facility	Agent	Agent ...	Agent ...	Agent ...	Agent ...	Conseq...	Conseq...	Conseq...	Conseq...
(no data ...)	Abrin	0.847	0.847	0.847	0.847	1.683	1.683	2.218	2.218

Select data points to show (use shift or ctrl for multiple selections)

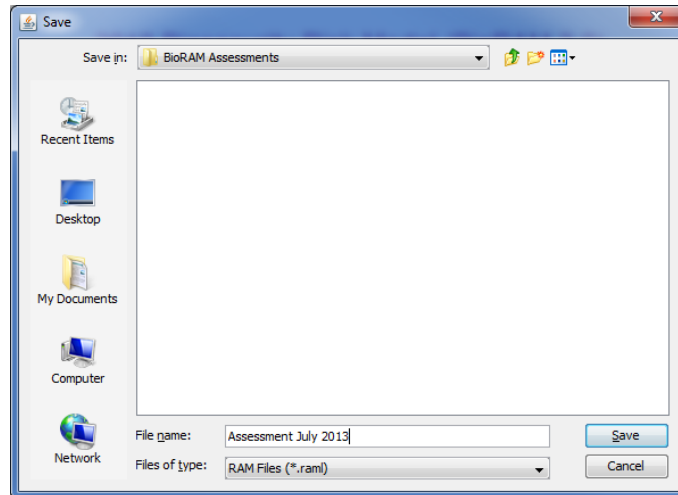
- Agent Potential - Risk to Human From Adversary With Access
- Agent Potential - Risk to Human From Adversary Without Access
- Agent Potential - Risk to Animals From Adversary With Access
- Agent Potential - Risk to Animals From Adversary Without Access
- Consequence - Risk to Human From Adversary With Access
- Consequence - Risk to Human From Adversary Without Access
- Consequence - Risk to Animals From Adversary With Access
- Consequence - Risk to Animals From Adversary Without Access

7. The Model Structure tab allows you to see the risk drivers, looking at the question sensitivity chart will help to define the biggest drivers.



8. Under File, save your responses (Save Responses). This will allow you to load them later (Load Responses).

Save the responses in a folder separate from the folder the BioRAM software is in. This will make loading the responses easier in the future.



9. You can also create a report (Create Report) to export the results into a printable format.