

Frequency Testing

Reduces the analytical testing requirements based upon the number of samples of a specific product registered

Edit/Add Substance

Substance Code: SelTest02

Substance Description: Selective Testing + Force

Substance Text 1: [] Substance Num 1: []

Substance Text 2: []

Selective Testing

Time lapse before full testing must occur: 50 Days

Number of Force Test Samples: 0

Current Sample Count: 35

Full Testing After: 23 Samples

Selective Testing

Buttons: OK, Cancel, Tests, History, Notes

- **Testing frequency can be specified for each test on a substance/product e.g. add test every nth sample registered**
- **Tests may be forced for the first 'n' samples of a new substance/product**
- **Full testing may be automatically allocated if a specified time period has elapsed since the last sample of a particular substance/product.**

Each time a product sample is registered in the system a counter is incremented on the appropriate specification record for the type of product. This counter is used to determine whether the test should be included for the sample by comparing it with the frequency specified for it. The test frequency will be specified as a whole number, e.g. 1,2,3,4 etc. and will be compared with the counter to determine if it is a factor. If it is an exact factor the test will be included.

A small example is shown below:

Product Counter	Test Frequencies			
	1	2	3	4
0	✓	✓	✓	✓
1	✓	✗	✗	✗
2	✓	✓	✗	✗
3	✓	✗	✓	✗
4	✓	✓	✗	✓
5	✓	✗	✗	✗
6	✓	✓	✓	✗
7	✓	✗	✗	✗
8	✓	✓	✗	✓

✓ = Test Included, ✗ = Test Excluded

Further options are available— It is possible to ensure that the first n samples registered for a new substance are registered with the full complement of tests before reduced testing begins. Full testing can also be specified if it is more than n days since the last sample of this type was registered. Similarly full testing can occur after n samples of a product have been registered.

These further options make use of a “Force” test type. When full testing occurs due to one of the above options being triggered, tests which you have marked as being “Force” type tests are added to the sample. The “Force” tests are not normally involved in the reduced testing schedule. These tests can be used to occasionally submit the product to rigorous testing.

The Screens

Three modified screens are required for selective testing.

- **Sample Registration**

A registration screen which uses the selective testing option only has one feature added to the basic Matrix screen. A selective testing check box is provided. If this box is not checked whilst registering a sample, the selective testing option would be overridden i.e. all substance tests would be added to the sample and no updates would be made to the frequency testing information held on the substance. This check box could be hidden off the screen if required.

The Selective Testing Registration screen

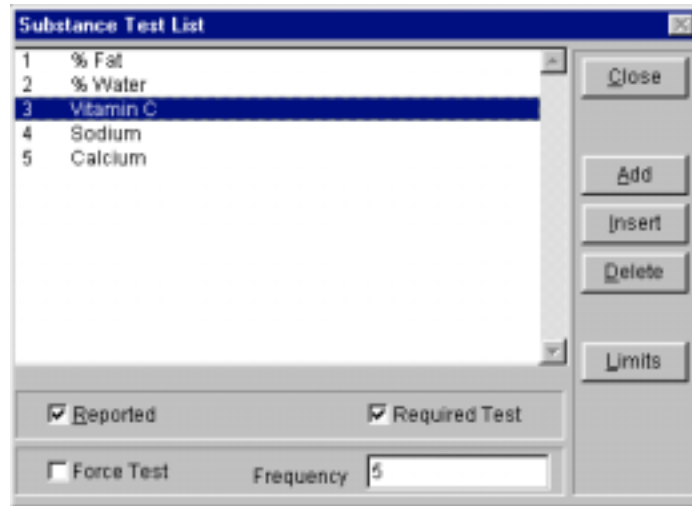
- **Substance Maintenance**

The substance maintenance screen has five extra fields:

- i) **Selective testing check box.**
If this box is not checked, then selective testing is currently not used on this substance, even if all other required information is present.
- ii) **Current sample count.**
This box is maintained by Matrix and is incremented by 1 every time a selective testing sample is registered for this substance. The count can be changed manually if required. It is this value which is used to determine which tests should be added to the sample.
- iii) **Number of Force Test Samples.**
This value is only used once in the life time of this substance. It is the number of samples which should be registered with the “Force” tests prior to the start of selective testing on a new substance. During the force test period, this number is decremented every time a sample is registered for this substance. When the number reaches zero, selective testing begins. Only tests marked as “Force” tests are added during this initial period. During Force testing, the sample count is updated.
- iv) **Time Lapse before full testing must occur.**
This field is used to specify that “Full Testing” should be used if it is more than n days since the last sample of this type was registered. When this condition is met, the current sample will have every test present on the substance added to it (“Force” tests and non “Force” tests). Only one sample is affected, subsequent samples will resume normal selective testing.
- v) **Full Testing After n Samples.**
This field has a similar effect to the Time Lapse field. Every nth sample will be subject to “Full Testing”.

- **Substance Test List**

This screen has two fields not present on the standard Matrix systems. These fields must be set for each individual test in the list by highlighting the required test and entering information.



The Substance Test List Screen

i) **Force Test**

If the force test checkbox is checked for an individual test then it is carried out during the initial forced test process or during tests forced by date or number of samples.

ii) **Frequency**

The frequency edit box determines how often in the normal testing process a test is carried out. Setting a frequency of 1 means the test will be added to every sample after the force test period. A frequency of 2 will add the test to every other sample of this substance. If a test is only to be carried out during a force test period then the frequency is set to zero.

Frequency Testing is a standard feature of Matrix Enterprise