

Calculation of the total number of events required for a given precision.

For a CV of (%):		⇒	1.0	2.5	5.0	10	20
Number of positive events to be recorded:		⇒	10000	16000	400	100	25
When occurring at a frequency of:		Total number of events which must be collected ¹ :					
(%)	1:n						
10	10	100,000	16,000	4,000	1,000	250	
1	100	10 ⁶	160,000	40,000	10,000	2,500	
0.1	1000	10 ⁷	1.6x10 ⁶	400,000	100,000	25,000	
0.01	10000	10 ⁸	1.6x10 ⁷	4x10 ⁶	10 ⁶	250,000	
0.001	100000	10 ⁹	1.6x10 ⁸	4x10 ⁷	10 ⁷	2.5x10 ⁶	

¹The number of events to be collected which are shown as exponents would require considerable acquisition times. For example, at a flow rate of 5000/sec, it would take approximately 3.5 min to observe 10⁶ events