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§ 42.143 Operating Characteristic (OC) curves for on-line sampling and inspection.

(a) This section contains the Operating Characteristic (OC) curve for each of the on-line cumulative sum sampling plans provided in subpart D. The OC curve and the corresponding cumulative sum sampling plans are listed by AQL.

(b) Different plan parameters used to make acceptance and rejection decisions are provided for each AQL.

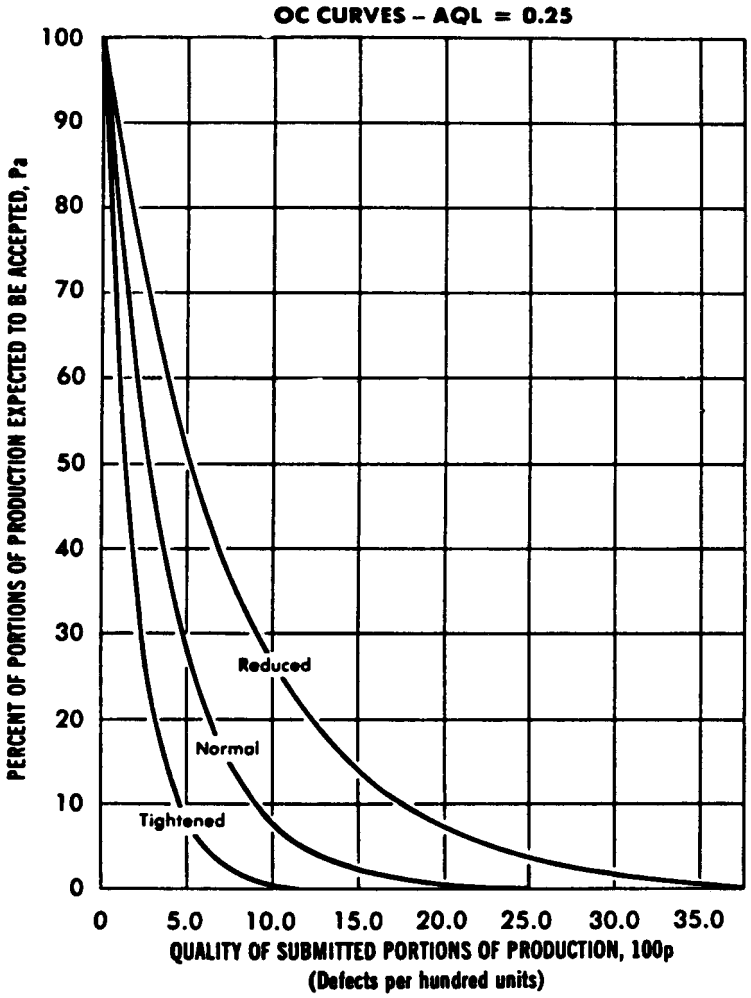
(c) The curves show the ability of the various cumulative sum sampling plans to distinguish between good and bad portions of production. The interpretation of these curves for portions of production is similar to the interpretation of the OC curves for stationary lots as illustrated in § 42.140(c).

REDUCED, NORMAL AND TIGHTENED INSPECTION PLANS—CUMULATIVE SUM SAMPLING PLANS AND OPERATING CHARACTERISTIC (OC) CURVES FOR AQL=0.25 DEFECTS PER HUNDRED UNITS

[Sampling plans—AQL=0.25]

Identification name of OC curves											
Reduced				Normal				Tightened			
n_g	T	L	S	n_g	T	L	S	n_g	T	L	S
13	0	0	0	25	0.05	0.95	0.35	50	0.1	0.9	0.3

n_g=Number of sample units in a subgroup. T=Subgroup tolerance. L=Acceptance limit. S=Starting value.

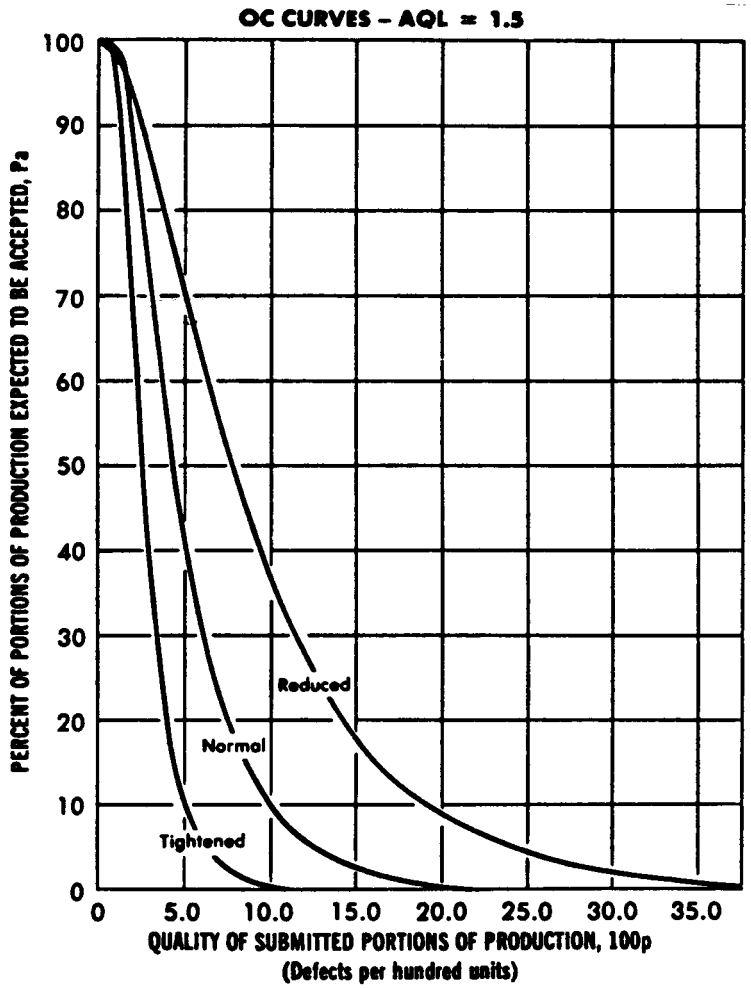


REDUCED, NORMAL, AND TIGHTENED INSPECTION PLANS—CUMULATIVE SUM SAMPLING PLANS AND OPERATING CHARACTERISTIC (OC) CURVES FOR AQL=1.5 DEFECTS PER HUNDRED UNITS

[Sampling plans—AQL=1.5]

Identification name of OC curves											
Reduced				Normal				Tightened			
n_g	T	L	S	n_g	T	L	S	n_g	T	L	S
13	0.5	0.5	0	25	0.5	2	1	50	0.8	1.6	0.4

n_g=Number of sample units in a subgroup. T=Subgroup tolerance. L=Acceptance limit. S=Starting value.

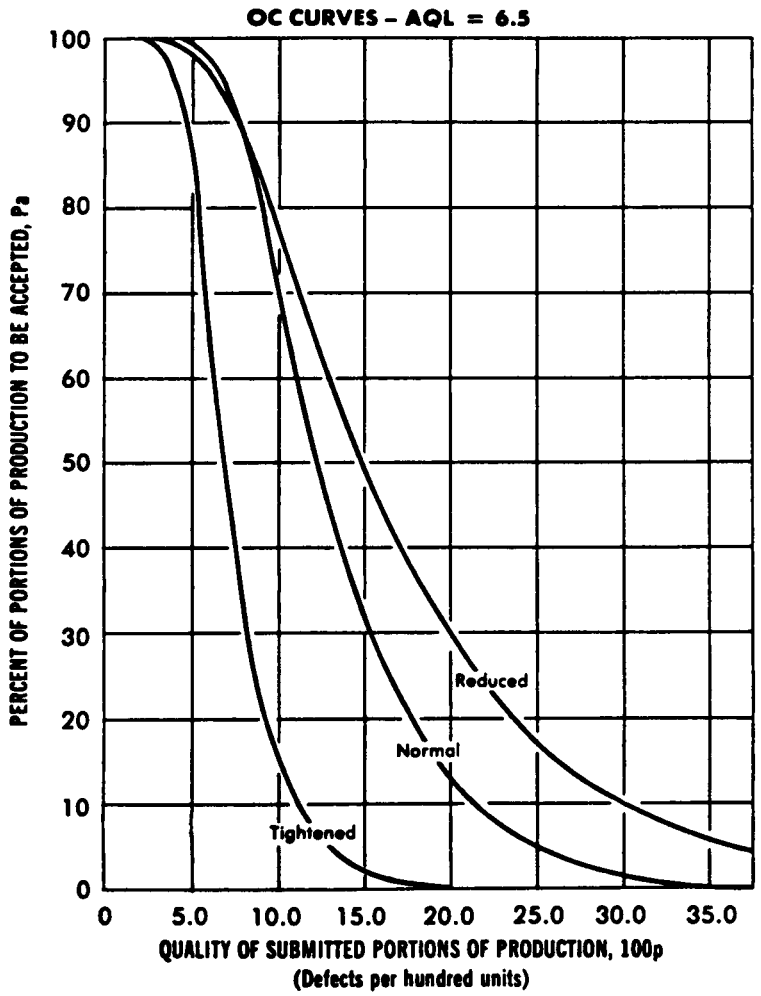


REDUCED, NORMAL, AND TIGHTENED INSPECTION PLANS—CUMULATIVE SAMPLING PLANS AND OPERATING CHARACTERISTIC (OC) CURVES FOR AQL=6.5 DEFECTS PER HUNDRED UNITS

[Sampling Plans—AQL=6.5]

Identification name of OC curves											
Reduced				Normal				Tightened			
n_g	T	L	S	n_g	T	L	S	n_g	T	L	S
13	1	2	1	25	2	3	1	50	2.5	3	1

n_g=Number of sample units in a subgroup. T=Subgroup tolerance. L=Acceptance limit. S=Starting value.



[45 FR 69424; Oct. 21, 1980. Redesignated at 46 FR 63203, Dec. 31, 1981]

PART 43—STANDARDS FOR SAMPLING PLANS

DEFINITIONS

SAMPLING PLANS

AUTHORITY: Secs. 203, 205, 60 Stat. 1087, as amended, 1090, as amended; 7 U.S.C. 1622, 1624.

SOURCE: 29 FR 5870, May 5, 1964, unless otherwise noted. Redesignated at 42 FR 32514, June 27, 1977, and further redesignated at 46 FR 63203, Dec. 31, 1981.

DEFINITIONS

§ 43.101 Meaning of words.

Words used in this subpart in the singular form shall be considered to impart the plural, or vice versa, as the case may demand.

§ 43.102 Definitions.

Statistical and inspection or sampling terms and their respective definitions that are used in the sampling plans and operating characteristic curves of which are pertinent to the understanding of inspection by attributes follow:

Acceptable quality level (*AQL*). The AQL is expressed in terms of percent defective or defects per 100 units. Lots having a quality level equal to a specified AQL will be accepted approximately 95 percent of the time when using the sampling plans prescribed for that AQL.

Acceptance number (*Ac*). The number in a sampling plan that indicates the maximum number of defects or defectives permitted in a sample in order to consider a lot as meeting a specific requirement.

Acceptance sampling. The art or science that deals with procedures in which decisions to accept or reject lots or processes are based on the examination of samples.

Attributes. Refers to the measurement of a given factor noting and recording the presence or absence of some characteristic (attribute) in each of the units in the group under consideration.

Consumer's risk. The risk a consumer takes that a lot will be accepted by a sampling plan even though the lot does not conform to requirements. In the standards of this subpart this risk is nominally set at ten percent.

Consumer protection. The ability of a sampling plan to reject unacceptable supplies. This is measured as the complement of the probability of acceptance (Pa) for the Limited Quality (LQ) lots. The consumer protection is 90 percent in these standards.

Defect. A failure to meet a requirement imposed on a unit with respect to a single quality characteristic. A unit may contain more than one defect.

Defective. A defective unit; one containing one or more defects with respect to the quality characteristic(s) under consideration.

Inspection. The examination (including testing) of supplies (including, when appropriate, raw materials, components and intermediate assemblies).

(a) *Acceptance inspection.* An inspection to determine conformance of supplies to specified requirements in order to accept or reject the supplies.

(b) *Estimation inspection.* In dealing with attributes, an inspection to determine the amount of the supplies conforming to a specified requirement—usually expressed as a percentage.

Inspection by attributes. Inspection whereby either the sample unit is classified as defective or non-defective with respect to a requirement or set of requirements (when on a ''defective'' basis); or, inspection whereby the number of defects in each sample unit is counted with respect to a requirement or set of requirements (when on a ''defect'' basis).

Limiting quality (*LQ*). The LQ is expressed in terms of percent defective or defects per 100 units. Lots inspected under the standards of this subpart that have a ten percent probability of acceptance are referred to as a lot having a quality level equal to LQ.

Lot. A collection of units of the same size, type and style which has been