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**SAMPLING PROCEDURES AND TABLES
FOR INSPECTION BY ATTRIBUTES**



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DEPARTMENT OF DEFENSE
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SAMPLING PROCEDURES AND TABLES FOR INSPECTION BY ATTRIBUTES

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FOREWORD

This publication provides sampling procedures and reference tables for use in planning and conducting inspection by attributes. The sampling concept is based on the probabilistic recurrence of events when a series of lots or batches are produced in a stable environment.

This publication should be used to guide the user in the development of an inspection strategy that provides a cost effective approach to attaining confidence in product compliance with contractual technical requirements. The user is warned of the assumed risks relative to the chosen sample size and AQL.

Military specifications should not contain requirements for use of specific sampling plans, nor should they provide AQL's or LTPD's as a requirement.

Sampling plans for continuous, rather than lot inspection, are contained in MIL-STD-1235, "Single and Multi-Level Continuous Sampling Procedures and Tables for Inspection by Attributes".

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SAMPLING PROCEDURES AND TABLES
FOR INSPECTION BY ATTRIBUTES

1. SCOPE

1.1 Purpose. This publication establishes lot or batch sampling plans and procedures for inspection by attributes. This publication shall not be interpreted to supercede or conflict with any contractual requirements. The words "accept", "acceptance", "acceptable", etc, refer only to the contractor's use of the sampling plans contained in this standard and do not imply an agreement by the Government to accept any product. Determination of acceptability by the Government shall be as described in contractual documents. The sampling plans described in this standard are applicable to AQL's of .01 percent or higher and are therefore not suitable for applications where quality levels in the defective parts per million range can be realized.

1.2 Application. Sampling plans designated in this publication are applicable, but not limited, to inspection of the following:

- a. End items.
- b. Components and raw materials.
- c. Operations or services.
- d. Materials in process.
- e. Supplies in storage.
- f. Maintenance operations.
- g. Data or records.
- h. Administrative procedures.

These plans are intended primarily to be used for a continuing series of lots or batches. The plans may also be used for the inspection of isolated lots or batches, but, in this latter case, the user is cautioned to consult the operating characteristic curves to find a plan which will yield the desired protection (See 4.11).

2. REFERENCED DOCUMENTS

2.1 Not applicable.

3. DEFINITIONS

3.1 Acceptable Quality Level (AQL). When a continuous series of lots is considered, the AQL is the quality level which, for the purposes of sampling inspection, is the limit of a satisfactory process average (See 3.19).

NOTE: A sampling plan and an AQL are chosen in accordance with the risk assumed. Use of a value of AQL for a certain defect or group of defects indicates that the sampling plan will accept the great majority of the lots or batches provided the process average level of percent defective (or defects per hundred units) in these lots or batches be no greater than the designated value of AQL. Thus, the AQL is a designated value of percent defective (or defects per hundred units) for which lots will be accepted most of the time by the sampling procedure being used. The sampling plans provided herein are so arranged that the probability of acceptance at the designated AQL value depends upon the sample size, being generally higher for large samples than for small ones, for a given AQL. The AQL alone does not identify the chances of accepting or rejecting individual lots or batches but more directly relates to what might be expected from a series of lots or batches, provided the steps indicated in this publication are taken. It is necessary to refer to the operating characteristic curve of the plan to determine the relative risks.

3.2 Average Outgoing Quality (AOQ). For a particular process average, the AOQ is the average quality of outgoing product including all accepted lots or batches, plus all rejected lots or batches after the rejected lots or batches have been effectively 100 percent inspected and all defectives replaced by non-defectives.

3.3 Average Outgoing Quality Limit (AOQL). The AOQL is the maximum AOQ for a given acceptance sampling plan. Factors for computing AOQL values are given in Table V-A for each of the single sampling plans for normal inspection and in Table V-B for each of the single sampling plans for tightened inspection.

3.4 Classification of Defects. A classification of defects is the enumeration of possible defects of the unit of product classified according to their seriousness.

3.5 Critical Defect. A critical defect is a defect that judgement and experience indicate would result in hazardous or unsafe conditions for individuals using, maintaining, or depending upon the product, or a defect that judgement and experience indicate is likely to prevent performance of the tactical function of a major end item such as a ship, aircraft, tank, missile, or space vehicle.

3.6 Critical Defective. A critical defective is a unit of product which contains one or more critical defects and may also contain major and/or minor defects.

3.7 Defect. A defect is any nonconformance of the unit of product with specified requirements.

3.8 Defective. A defective is a unit of product which contains one or more defects.

3.9 Defects per Hundred Units. The number of defects per hundred units of any given quantity of units of product is one hundred times the number of defects contained therein (one or more defects being possible in any unit of product) divided by the total number of units of product, i.e.:

$$\text{Defects per hundred units} = \frac{\text{Number of defects} \times 100}{\text{Number of units inspected}}$$

3.10 Inspection. Inspection is the process of measuring, examining, testing, or otherwise comparing the unit of product with the requirements.

3.11 Inspection by Attributes. Inspection by attributes is inspection whereby either the unit of product is classified simply as defective or non-defective, or the number of defects in the unit of product is counted, with respect to a given requirement or set of requirements.

3.12 Lot or Batch. The term lot or batch shall mean "inspection lot" or "inspection batch", i.e., a collection of units of product from which a sample is to be drawn and inspected and may differ from a collection of units designated as a lot or batch for other purposes (e.g., production, shipment, etc.).

3.13 Lot or Batch Size. The lot or batch size is the number of units of product in a lot or batch.

3.14 Major Defect. A major defect is a defect, other than critical, that is likely to result in failure, or to reduce materially the usability of the unit of product for its intended purpose.

3.15 Major Defective. A major defective is a unit of product which contains one or more major defects, and may also contain minor defects but contains no critical defect.

3.16 Minor Defect. A minor defect is a defect that is not likely to reduce materially the usability of the unit of product for its intended purpose, or is a departure from established standards having little bearing on the effective use or operation of the unit.

3.17 Minor Defective. A minor defective is a unit of product which contains one or more minor defects but contains no critical or major defect.

3.18 Percent Defective. The percent defective of any given quantity of units of product is one hundred times the number of defective units of product contained therein divided by the total number of units of product, i.e.:

$$\text{Percent Defective} = \frac{\text{Number of defectives} \times 100}{\text{Number of units inspected}}$$

3.19 Process Average. The process average is the average percent defective or average number of defects per hundred units (whichever is applicable) of product submitted by the supplier for original inspection. Original inspection is the first inspection of a particular quantity of product as distinguished from the inspection of product which has been resubmitted after prior rejection.

3.20 Sample. A sample consists of one or more units of product drawn from a lot or batch, the units of the sample being selected at random without regard to their quality. The number of units of product in the sample is the sample size.

3.21 Sample Size Code Letter. The sample size code letter is a device used along with the AQL for locating a sampling plan on a table of sampling plans.

3.22 Sampling Plan. A sampling plan indicates the number of units of product from each lot or batch which are to be inspected (sample size or series of sample sizes) and the criteria for determining the acceptability of the lot or batch (acceptance and rejection numbers).

3.23 Unit of Product. The unit of product is the thing inspected in order to determine its classification as defective or non-defective or to count the number of defects. It may be a single article, a pair, a set, a length, an area, an operation, a volume, a component of an end product, or the end product itself. The unit of product may or may not be the same as the unit of purchase, supply, production, or shipment.

4. GENERAL REQUIREMENTS

4.1 Written Procedures. Written procedures are ordinarily developed and made available for the Government representative's review, upon request. When the written procedures indicate use of this standard, they shall comply with the requirements of this standard and reference appropriate parts as necessary.

4.2 Nonconformance. The extent of nonconformance of product shall be expressed either in terms of percent defective or in terms of defects per hundred units.

4.3 Formation and Identification of Lots or Batches. The product shall be assembled into identifiable lots, sublots, batches, or in such other manner as may be prescribed. Each lot or batch shall, as far as is practicable, consist of units of product of a single type, grade, class, size, and composition, manufactured under essentially the same conditions, and at essentially the same time. The lots or batches shall be identified by the contractor and shall be kept intact in adequate and suitable storage space.

4.4 AQL.

4.4.1 AQL Use. The AQL, together with the Sample Size Code Letter, is used for indexing the sampling plans provided herein.

4.4.2 Limitation. The selection or use of an AQL shall not imply that the contractor has the right to supply any defective unit of product.

4.4.3 Choosing AQLs. Different AQLs may be chosen for groups of defects considered collectively, or for individual defects. An AQL for a group of defects may be chosen in addition to AQLs for individual defects, or subgroups, within that group. AQL values of 10.0 or less may be expressed either in percent defective or in defects per hundred units; those over 10.0 shall be expressed in defects per hundred units only.

4.5 Sampling.

4.5.1 Representative (Stratified) Sampling. When appropriate, the number of units in the sample shall be selected in proportion to the size of sublots or sub-batches, or parts of the lot or batch, identified by some rational criterion. When representative sampling is used, the units from each subplot, sub-batch or part of the lot or batch shall be selected at random.

4.5.2 Time of Sampling. A sample may be drawn after all the units comprising the lot or batch have been assembled, or sample units may be drawn during assembly of the lot or batch, in which case the size of the lot or batch will be determined before any sample units are drawn. If the sample units are drawn during assembly of the lot or batch, and if the rejection number is reached before the lot is completed, that portion of the lot already completed shall be rejected. The cause of the defective product shall be determined and corrective action taken, after which a new lot or batch shall be begun.

4.5.3 Double or Multiple Sampling. When double or multiple sampling is to be used, each sample shall be selected over the entire lot or batch.

4.6 Inspection Procedures. Normal inspection will be used at the start of inspection. Normal, tightened or reduced inspection shall continue unchanged for each class of defects or defectives on successive lots or batches except where the switching procedures given below require change. The switching procedures shall be applied to each class of defects or defectives independently.

4.7 Switching Procedures.

4.7.1 Normal to Tightened. When normal inspection is in effect, tightened inspection shall be instituted when 2 out of 2, 3, 4, or 5 consecutive lots or batches have been rejected on original inspection (i.e., ignoring resubmitted lots or batches for this procedure).

4.7.2 Tightened to Normal. When tightened inspection is in effect, normal inspection shall be instituted when 5 consecutive lots or batches have been considered acceptable on original inspection.

4.7.3 Normal to Reduced. When normal inspection is in effect, reduced inspection shall be instituted provided that all of the following conditions are satisfied:

a. The preceding 10 lots or batches (or more, as indicated by the note to Table VIII) have been on normal inspection and all have been accepted on original inspection; and

b. The total number of defectives (or defects) in the samples from the preceding 10 lots or batches (or such other number as was used for condition "a" above) is equal to or less than the applicable number given in Table VIII. If double or multiple sampling is in use, all samples inspected should be included, not "first" samples only; and

c. Production is at a steady rate; and

d. Reduced inspection is considered desirable.

4.7.4 Reduced to Normal. When reduced inspection is in effect, normal inspection shall be instituted if any of the following occur on original inspection:

a. A lot or batch is rejected; or

b. A lot or batch is considered acceptable under the procedures of 4.10:1.4, or

c. Production becomes irregular or delayed; or

d. Other conditions warrant that normal inspection shall be instituted.

4.8 Discontinuation of Inspection. If the cumulative number of lots not accepted in a sequence of consecutive lots on original tightened inspection reaches five, the acceptance procedures of this standard shall be discontinued. Inspection under the provisions of this standard shall not be resumed until corrective action has been taken. Tightened inspection shall then be used as if 4.7.1 had been invoked.

4.9 Sampling Plans.

4.9.1 Inspection Level. The inspection level determines the relationship between the lot or batch size and the sample size. The inspection level to be used for any particular requirement will be as prescribed by the contractor's written procedures. Three inspection levels: I, II, and III, are given in Table I for general use (see 4.1). Normally, Inspection Level II is used. However, Inspection Level I may be used when less discrimination is needed, or Level III may be used for greater discrimination. Four additional special levels: S-1, S-2, S-3, and S-4, are given in the same table and may be used where relatively small sample sizes are necessary and large sampling risks can or must be tolerated.

NOTE: In the selection of inspection levels S-1 to S-4, care must be exercised to avoid AQLs inconsistent with these inspection levels. In other words, the purpose of the special inspection levels is to keep samples small when necessary. For instance, the code letters under S-1 go no further than D, equivalent to a single sample of size 8, but it is of no use to choose S-1 if the AQL is 0.10 percent for which the minimum sample is 125.

4.9.2 Code Letters. Sample sizes are designated by code letters. Table I shall be used to find the applicable code letter for the particular lot or batch size and the prescribed inspection level.

4.9.3 Obtaining Sampling Plan. The AQL and the code letter shall be used to obtain the sampling plan from Tables II, III, or IV. When no sampling plan is available for a given combination of AQL and code letter, the tables direct the user to a different letter. The sample size to be used is given by the new code letter, not by the original letter. If this procedure leads to different sample sizes for different classes of defects, the code letter corresponding to the largest sample size derived may be used for all classes of defects. As an alternative to a single sampling plan with an acceptance number of 0, the plan with an acceptance number of 1 with its correspondingly larger sample size for a designated AQL (where available), may be used.

4.9.4 Types of Sampling Plans. Three types of sampling plans: Single, Double, and Multiple, are given in Tables II, III, and IV, respectively. When several types of plans are available for a given AQL and code letter, any one may be used. A decision as to type of plan, either single, double, or multiple, when available for a given AQL and code letter, will usually be based upon the comparison between the administrative difficulty and the average sample sizes of the available plans. The average sample size of multiple plans is less than for double (except in the case corresponding to single acceptance number 1) and both of these are always less than a single sample size (see Table IX). Usually the administrative difficulty for single sampling and the cost per unit of the sample are less than for double or multiple.

4.10 Determination of Acceptability.

4.10.1 Percent Defective Inspection. To determine acceptability of a lot or batch under percent defective inspection, the applicable sampling plan shall be used in accordance with 4.10.1.1, 4.10.1.2, 4.10.1.3, and 4.10.1.4.

4.10.1.1 Single Sampling Plan. The number of sample units inspected shall be equal to the sample size given by the plan. If the number of defectives found in the sample is equal to or less than the acceptance number, the lot or batch shall be considered acceptable. If the number of defectives is equal to or greater than the rejection number, the lot or batch shall be rejected.

4.10.1.2 Double Sampling Plan. A number of sample units equal to the first sample size given by the plan shall be inspected. If the number of defectives found in the first sample is equal to or less than the first acceptance number, the lot or batch shall be considered acceptable. If the number of defectives found in the first sample is equal to or greater than the first rejection number, the lot or batch shall be rejected. If the number of defectives found in the first sample is between the first acceptance and rejection numbers, a second sample of the same size shall be inspected. The number of defectives found in the first and second samples shall be accumulated. If the cumulative number of defectives is equal to or less than the second acceptance number, the lot or batch shall be considered acceptable. If the cumulative number of defectives is equal to or greater than the second rejection number, the lot or batch shall be rejected.

4.10.1.3 Multiple Sample Plan. Under multiple sampling, the procedure shall be similar to that specified in 4.10.1.2, except that the number of successive samples required to reach a decision may be as many as seven.

4.10.1.4 Special Procedure for Reduced Inspection. Under reduced inspection, the sampling procedure may terminate without either acceptance or rejection criteria having been met. In these circumstances, the lot or batch will be considered acceptable, but normal inspection will be reinstated starting with the next lot or batch (see 4.7.4.b).

4.10.2 Defects per Hundred Units Inspection. To determine the acceptability of a lot or batch under defects per hundred units inspection, the procedure specified for percent defective inspection above shall be used, except that the word "defects" shall be substituted for "defectives".

4.11 Limiting Quality Protection. The sampling plans and associated procedures given in this publication were designed for use where the units of product are produced in a continuing series of lots or batches over a period of time. However, if the lot or batch is of an isolated nature, it is desirable to limit the selection of sampling plans to those, associated with a designated AQL value, that provide not less than a specified limiting quality protection. Sampling plans for this purpose can be selected by choosing a Limiting Quality (LQ) and a consumer's risk to be associated with it. Tables VI and VII give values of LQ for the commonly used consumer's risks of 10 percent and 5 percent respectively. If a different value of consumer's risk is required, the O.C. curves and their tabulated values may be used. The concept of LQ may also be useful in specifying the AQL and Inspection Levels for a series of lots or batches, thus fixing minimum sample size where there is some reason for avoiding (with more than a given consumer's risk) more than a limiting proportion of defectives (or defects) in any single lot or batch.

4.12 Curves.

4.12.1 Operating Characteristic Curves. The operating characteristic curves for normal inspection, shown in Table X, indicate the percentage of lots or batches which may be expected to be accepted under the various sampling plans for a given process quality. The curves shown are for single sampling; curves for double and multiple sampling are matched as closely as practicable. The O.C. curves shown for AQLs greater than 10.0 are based on the Poisson distribution and are applicable for defects per hundred units inspection; those for AQLs of 10.0 or less and sample sizes of 80 or less are based on the binomial distribution and are applicable for percent defective inspection; those for AQLs of 10.0 or less and sample sizes larger than 80 are based the Poisson distribution and are applicable either for defects per hundred units inspection, or for percent defective inspection (the Poisson distribution being an adequate approximation to the binomial distribution under these conditions). Tabulated values, corresponding to selected values or probabilities of acceptance (P_a , in percent) are given for each of the curves shown, and, in addition, for tightened inspection, and for defects per hundred units for AQLs of 10.0 or less and sample sizes of 80 or less.

4.12.2 Average Sample Size Curves. Average sample size curves for double and multiple sampling are in Table IX. These show the average sample sizes which may be expected to occur under the various sampling plans for given levels of process quality. The curves assume no curtailment of inspection and are approximate to the extent that they are based upon the Poisson distribution, and that the sample sizes for double and multiple sampling are assumed to be $0.631n$ and $0.25n$ respectively, where n is the equivalent sample size.

SECTION 5
TABLES AND CURVES

TABLE I—Sample size code letters

(see 4.9.1 and 4.9.2)

Lot or batch size	Special inspection levels					General inspection levels		
	S-1	S-2	S-3	S-4	I	II	III	
2 to 8	A	A	A	A	A	A	B	
9 to 15	A	A	A	A	A	B	C	
16 to 25	A	A	B	B	B	C	D	
26 to 50	A	B	B	C	C	D	E	
51 to 90	B	B	C	C	C	E	F	
91 to 150	B	B	C	D	D	F	G	
151 to 280	B	C	D	E	E	G	H	
281 to 500	B	C	D	E	F	H	I	
501 to 1200	C	C	E	F	F	I	J	
1201 to 3200	C	D	E	G	G	J	K	
3201 to 10000	C	D	F	G	H	K	L	
10001 to 35000	C	D	F	H	I	L	M	
35001 to 150000	D	E	G	J	L	N	P	
150001 to 500000	D	E	G	J	M	P	Q	
500001 and over	D	E	H	K	N	Q	R	

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TABLE II-A—Single sampling plans for normal inspection (Master table)

(see 4.9.3 and 4.9.4)

Sample size code letter	Sample size	Acceptable Quality Levels (normal inspection)																					
		0.010	0.015	0.025	0.040	0.065	1.0	1.5	2.5	4.0	6.5	10	15	25	40	65	100	150	250	400	650	1000	
A	2	→	→	→	→	→	→	→	→	→	→	→	→	→	→	→	→	→	→	→	→	→	→
B	3	→	→	→	→	→	→	→	→	→	→	→	→	→	→	→	→	→	→	→	→	→	→
C	5	→	→	→	→	→	→	→	→	→	→	→	→	→	→	→	→	→	→	→	→	→	→
D	8	→	→	→	→	→	→	→	→	→	→	→	→	→	→	→	→	→	→	→	→	→	→
E	13	→	→	→	→	→	→	→	→	→	→	→	→	→	→	→	→	→	→	→	→	→	→
F	20	→	→	→	→	→	→	→	→	→	→	→	→	→	→	→	→	→	→	→	→	→	→
G	32	→	→	→	→	→	→	→	→	→	→	→	→	→	→	→	→	→	→	→	→	→	→
H	50	→	→	→	→	→	→	→	→	→	→	→	→	→	→	→	→	→	→	→	→	→	→
J	80	→	→	→	→	→	→	→	→	→	→	→	→	→	→	→	→	→	→	→	→	→	→
K	125	→	→	→	→	→	→	→	→	→	→	→	→	→	→	→	→	→	→	→	→	→	→
L	200	→	→	→	→	→	→	→	→	→	→	→	→	→	→	→	→	→	→	→	→	→	→
N	315	→	→	→	→	→	→	→	→	→	→	→	→	→	→	→	→	→	→	→	→	→	→
N	500	→	→	→	→	→	→	→	→	→	→	→	→	→	→	→	→	→	→	→	→	→	→
P	800	→	→	→	→	→	→	→	→	→	→	→	→	→	→	→	→	→	→	→	→	→	→
Q	1250	→	→	→	→	→	→	→	→	→	→	→	→	→	→	→	→	→	→	→	→	→	→
R	2000	→	→	→	→	→	→	→	→	→	→	→	→	→	→	→	→	→	→	→	→	→	→

Use first sampling plan below arrow. If sample size equals, or exceeds, lot or batch size, do 100 percent inspection.
 Use first sampling plan above arrow.
 Ac = Acceptance number.
 Re = Rejection number.

SINGLE
NORMAL

TABLE II-B — Single sampling plans for tightened inspection (Master table)

(see 4.9.3 and 4.9.4)

Sample size code letter	Sample size	Acceptable Quality Levels (tightened inspection)																									
		0.010	0.015	0.025	0.040	0.065	0.10	0.15	0.25	0.40	0.65	1.0	1.5	2.5	4.0	6.5	10	15	25	40	65	100	150	250	400	650	1000
A	2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
B	3	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
C	5	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
D	8	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
E	13	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
F	20	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
G	32	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
H	50	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
J	80	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
K	125	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
L	200	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
M	315	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
N	500	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
P	800	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Q	1250	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
R	2000	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
S	3150	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0

Use first sampling plan below arrow.
 Use first sampling plan above arrow.
 Ac = Acceptance number.
 Re = Rejection number.

TABLE II-C—Single sampling plans for reduced inspection (Master table)

(see 4.9.3 and 4.9.4)

Sample size code letter	Sample size	Acceptable Quality Levels (reduced inspection)																					
		0.010	0.015	0.025	0.040	0.065	1.0	1.5	2.5	4.0	6.5	10	15	25	40	65	100	150	250	400	650	1000	
A	2	Ac Re	Ac Re	Ac Re	Ac Re	Ac Re	Ac Re	Ac Re	Ac Re	Ac Re	Ac Re	Ac Re	Ac Re	Ac Re	Ac Re	Ac Re	Ac Re	Ac Re	Ac Re	Ac Re	Ac Re	Ac Re	Ac Re
B	2	Ac Re	Ac Re	Ac Re	Ac Re	Ac Re	Ac Re	Ac Re	Ac Re	Ac Re	Ac Re	Ac Re	Ac Re	Ac Re	Ac Re	Ac Re	Ac Re	Ac Re	Ac Re	Ac Re	Ac Re	Ac Re	Ac Re
C	2	Ac Re	Ac Re	Ac Re	Ac Re	Ac Re	Ac Re	Ac Re	Ac Re	Ac Re	Ac Re	Ac Re	Ac Re	Ac Re	Ac Re	Ac Re	Ac Re	Ac Re	Ac Re	Ac Re	Ac Re	Ac Re	Ac Re
D	3	Ac Re	Ac Re	Ac Re	Ac Re	Ac Re	Ac Re	Ac Re	Ac Re	Ac Re	Ac Re	Ac Re	Ac Re	Ac Re	Ac Re	Ac Re	Ac Re	Ac Re	Ac Re	Ac Re	Ac Re	Ac Re	Ac Re
E	5	Ac Re	Ac Re	Ac Re	Ac Re	Ac Re	Ac Re	Ac Re	Ac Re	Ac Re	Ac Re	Ac Re	Ac Re	Ac Re	Ac Re	Ac Re	Ac Re	Ac Re	Ac Re	Ac Re	Ac Re	Ac Re	Ac Re
F	8	Ac Re	Ac Re	Ac Re	Ac Re	Ac Re	Ac Re	Ac Re	Ac Re	Ac Re	Ac Re	Ac Re	Ac Re	Ac Re	Ac Re	Ac Re	Ac Re	Ac Re	Ac Re	Ac Re	Ac Re	Ac Re	Ac Re
G	13	Ac Re	Ac Re	Ac Re	Ac Re	Ac Re	Ac Re	Ac Re	Ac Re	Ac Re	Ac Re	Ac Re	Ac Re	Ac Re	Ac Re	Ac Re	Ac Re	Ac Re	Ac Re	Ac Re	Ac Re	Ac Re	Ac Re
H	20	Ac Re	Ac Re	Ac Re	Ac Re	Ac Re	Ac Re	Ac Re	Ac Re	Ac Re	Ac Re	Ac Re	Ac Re	Ac Re	Ac Re	Ac Re	Ac Re	Ac Re	Ac Re	Ac Re	Ac Re	Ac Re	Ac Re
J	32	Ac Re	Ac Re	Ac Re	Ac Re	Ac Re	Ac Re	Ac Re	Ac Re	Ac Re	Ac Re	Ac Re	Ac Re	Ac Re	Ac Re	Ac Re	Ac Re	Ac Re	Ac Re	Ac Re	Ac Re	Ac Re	Ac Re
K	50	Ac Re	Ac Re	Ac Re	Ac Re	Ac Re	Ac Re	Ac Re	Ac Re	Ac Re	Ac Re	Ac Re	Ac Re	Ac Re	Ac Re	Ac Re	Ac Re	Ac Re	Ac Re	Ac Re	Ac Re	Ac Re	Ac Re
L	80	Ac Re	Ac Re	Ac Re	Ac Re	Ac Re	Ac Re	Ac Re	Ac Re	Ac Re	Ac Re	Ac Re	Ac Re	Ac Re	Ac Re	Ac Re	Ac Re	Ac Re	Ac Re	Ac Re	Ac Re	Ac Re	Ac Re
M	125	Ac Re	Ac Re	Ac Re	Ac Re	Ac Re	Ac Re	Ac Re	Ac Re	Ac Re	Ac Re	Ac Re	Ac Re	Ac Re	Ac Re	Ac Re	Ac Re	Ac Re	Ac Re	Ac Re	Ac Re	Ac Re	Ac Re
N	200	Ac Re	Ac Re	Ac Re	Ac Re	Ac Re	Ac Re	Ac Re	Ac Re	Ac Re	Ac Re	Ac Re	Ac Re	Ac Re	Ac Re	Ac Re	Ac Re	Ac Re	Ac Re	Ac Re	Ac Re	Ac Re	Ac Re
P	315	Ac Re	Ac Re	Ac Re	Ac Re	Ac Re	Ac Re	Ac Re	Ac Re	Ac Re	Ac Re	Ac Re	Ac Re	Ac Re	Ac Re	Ac Re	Ac Re	Ac Re	Ac Re	Ac Re	Ac Re	Ac Re	Ac Re
Q	500	Ac Re	Ac Re	Ac Re	Ac Re	Ac Re	Ac Re	Ac Re	Ac Re	Ac Re	Ac Re	Ac Re	Ac Re	Ac Re	Ac Re	Ac Re	Ac Re	Ac Re	Ac Re	Ac Re	Ac Re	Ac Re	Ac Re
R	800	Ac Re	Ac Re	Ac Re	Ac Re	Ac Re	Ac Re	Ac Re	Ac Re	Ac Re	Ac Re	Ac Re	Ac Re	Ac Re	Ac Re	Ac Re	Ac Re	Ac Re	Ac Re	Ac Re	Ac Re	Ac Re	Ac Re

- Use first sampling plan below arrow.
- Use first sampling plan above arrow.
- Ac = Acceptance number.
- Re = Rejection number.
- † = If the acceptance number has been exceeded, but the rejection number has not been reached, accept the lot, but institute normal inspection (see 4.10.1.4).

SINGLE
REDUCED

TABLE III-A—Double sampling plans for normal inspection (Master table)

(see 4.9.3 and 4.9.4)

Sample size code letter	Sample size	Form factor sample size	Acceptable Quality Levels (normal inspection)																										
			0.010	0.015	0.025	0.040	0.065	0.10	0.15	0.25	0.40	0.65	1.0	1.5	2.5	4.0	6.5	10	15	25	40	65	100	150	250	400	650	1000	
A			↑	↑	↑	↑	↑	↑	↑	↑	↑	↑	↑	↑	↑	↑	↑	↑	↑	↑	↑	↑	↑	↑	↑	↑	↑	↑	↑
B	2	2	↑	↑	↑	↑	↑	↑	↑	↑	↑	↑	↑	↑	↑	↑	↑	↑	↑	↑	↑	↑	↑	↑	↑	↑	↑	↑	↑
C	3	3	↑	↑	↑	↑	↑	↑	↑	↑	↑	↑	↑	↑	↑	↑	↑	↑	↑	↑	↑	↑	↑	↑	↑	↑	↑	↑	↑
D	5	5	↑	↑	↑	↑	↑	↑	↑	↑	↑	↑	↑	↑	↑	↑	↑	↑	↑	↑	↑	↑	↑	↑	↑	↑	↑	↑	↑
E	8	8	↑	↑	↑	↑	↑	↑	↑	↑	↑	↑	↑	↑	↑	↑	↑	↑	↑	↑	↑	↑	↑	↑	↑	↑	↑	↑	↑
F	13	13	↑	↑	↑	↑	↑	↑	↑	↑	↑	↑	↑	↑	↑	↑	↑	↑	↑	↑	↑	↑	↑	↑	↑	↑	↑	↑	↑
G	20	20	↑	↑	↑	↑	↑	↑	↑	↑	↑	↑	↑	↑	↑	↑	↑	↑	↑	↑	↑	↑	↑	↑	↑	↑	↑	↑	↑
H	32	32	↑	↑	↑	↑	↑	↑	↑	↑	↑	↑	↑	↑	↑	↑	↑	↑	↑	↑	↑	↑	↑	↑	↑	↑	↑	↑	↑
I	50	50	↑	↑	↑	↑	↑	↑	↑	↑	↑	↑	↑	↑	↑	↑	↑	↑	↑	↑	↑	↑	↑	↑	↑	↑	↑	↑	↑
J	80	80	↑	↑	↑	↑	↑	↑	↑	↑	↑	↑	↑	↑	↑	↑	↑	↑	↑	↑	↑	↑	↑	↑	↑	↑	↑	↑	↑
K	125	125	↑	↑	↑	↑	↑	↑	↑	↑	↑	↑	↑	↑	↑	↑	↑	↑	↑	↑	↑	↑	↑	↑	↑	↑	↑	↑	↑
L	200	200	↑	↑	↑	↑	↑	↑	↑	↑	↑	↑	↑	↑	↑	↑	↑	↑	↑	↑	↑	↑	↑	↑	↑	↑	↑	↑	↑
M	315	315	↑	↑	↑	↑	↑	↑	↑	↑	↑	↑	↑	↑	↑	↑	↑	↑	↑	↑	↑	↑	↑	↑	↑	↑	↑	↑	↑
N	500	500	↑	↑	↑	↑	↑	↑	↑	↑	↑	↑	↑	↑	↑	↑	↑	↑	↑	↑	↑	↑	↑	↑	↑	↑	↑	↑	↑
O	800	800	↑	↑	↑	↑	↑	↑	↑	↑	↑	↑	↑	↑	↑	↑	↑	↑	↑	↑	↑	↑	↑	↑	↑	↑	↑	↑	↑
P	1250	1250	↑	↑	↑	↑	↑	↑	↑	↑	↑	↑	↑	↑	↑	↑	↑	↑	↑	↑	↑	↑	↑	↑	↑	↑	↑	↑	↑
Q	1750	1750	↑	↑	↑	↑	↑	↑	↑	↑	↑	↑	↑	↑	↑	↑	↑	↑	↑	↑	↑	↑	↑	↑	↑	↑	↑	↑	↑

- ↑ Use first sampling plan unless otherwise specified.
- ↓ Use first sampling plan unless otherwise specified.
- Ac Acceptance number
- Re Rejection number
- Use corresponding single sampling plan (or alternatively, use double sampling plan unless otherwise available)

TABLE IV-A—Multiple sampling plans for normal inspection (Master table)

(see 4.9.3 and 4.9.4)

Sample size code letter	Sample size	Number of samples	Acceptable Quality Levels (normal inspection)															
			0.010	0.015	0.025	0.035	0.050	0.075	0.100	0.150	0.200	0.300	0.400	0.500	0.650	1.000		
A	2	2	→															
B	3	3	→															
C	4	4	→															
D	5	5	→															
E	6	6	→															
F	7	7	→															
G	8	8	→															
H	9	9	→															
I	10	10	→															
J	11	11	→															
K	12	12	→															
L	13	13	→															
M	14	14	→															
N	15	15	→															
O	16	16	→															
P	17	17	→															
Q	18	18	→															
R	19	19	→															
S	20	20	→															
T	21	21	→															
U	22	22	→															
V	23	23	→															
W	24	24	→															
X	25	25	→															
Y	26	26	→															
Z	27	27	→															
AA	28	28	→															
AB	29	29	→															
AC	30	30	→															
AD	31	31	→															
AE	32	32	→															
AF	33	33	→															
AG	34	34	→															
AH	35	35	→															
AI	36	36	→															
AJ	37	37	→															
AK	38	38	→															
AL	39	39	→															
AM	40	40	→															
AN	41	41	→															
AO	42	42	→															
AP	43	43	→															
AQ	44	44	→															
AR	45	45	→															
AS	46	46	→															
AT	47	47	→															
AU	48	48	→															
AV	49	49	→															
AW	50	50	→															
AX	51	51	→															
AY	52	52	→															
AZ	53	53	→															
BA	54	54	→															
BB	55	55	→															
BC	56	56	→															
BD	57	57	→															
BE	58	58	→															
BF	59	59	→															
BG	60	60	→															
BH	61	61	→															
BI	62	62	→															
BJ	63	63	→															
BK	64	64	→															
BL	65	65	→															
BM	66	66	→															
BN	67	67	→															
BO	68	68	→															
BP	69	69	→															
BQ	70	70	→															
BR	71	71	→															
BS	72	72	→															
BT	73	73	→															
BU	74	74	→															
BV	75	75	→															
BW	76	76	→															
BX	77	77	→															
BY	78	78	→															
BZ	79	79	→															
CA	80	80	→															
CB	81	81	→															
CC	82	82	→															
CD	83	83	→															
CE	84	84	→															
CF	85	85	→															
CG	86	86	→															
CH	87	87	→															
CI	88	88	→															
CJ	89	89	→															
CK	90	90	→															
CL	91	91	→															
CM	92	92	→															
CN	93	93	→															
CO	94	94	→															
CP	95	95	→															
CQ	96	96	→															
CR	97	97	→															
CS	98	98	→															
CT	99	99	→															
CU	100	100	→															
CV	101	101	→															
CW	102	102	→															
CX	103	103	→															
CY	104	104	→															
CZ	105	105	→															
DA	106	106	→															
DB	107	107	→															
DC	108	108	→															
DD	109	109	→															
DE	110	110	→															
DF	111	111	→															
DG	112	112	→															
DH	113	113	→															
DI	114	114	→															
DJ	115	115	→															
DK	116	116	→															
DL	117	117	→															
DM	118	118	→															
DN	119	119	→															
DO	120	120	→															
DP	121	121	→															
DQ	122	122	→															
DR	123	123	→															
DS	124	124	→															
DT	125	125	→															
DU	126	126	→															
DV	127	127	→															
DW	128	128	→															
DX	129	129	→															
DY	130	130	→															
DZ	131	131	→															
EA	132	132	→															
EB	133	133	→															
EC	134	134	→															
ED	135	135	→															
EE	136	136	→															
EF	137	137	→															
EG	138	138	→															
EH	139	139	→															
EI	140	140	→															
EJ	141	141	→															
EK	142	142	→															
EL	143	143	→															
EM	144	144	→															
EN	145	145	→															
EO	146	146	→															
EP	147	147	→															
EQ	148	148	→															
ER	149	149	→															
ES	150	150	→															
ET	151	151	→															
EU	152	152	→															
EV	153	153	→															
EW	154	154	→															
EX	155	155	→															
EY	156	156	→															
EZ	157	157	→															
FA	158	158	→															
FB	159	159	→															
FC	160	160	→															
FD	161	161	→															
FE	162	162	→															
FF	163	163	→															
FG	164	164	→															
FH	165	165	→															
FI	166	166	→															
FJ	167	167	→															
FK	168	168	→															
FL	169	169	→															
FM	170	170	→															
FN	171	171	→															
FO	172	172	→															
FP	173	173	→															
FQ	174	174	→															
FR	175	175	→															
FS	176	176	→															
FT	177	177	→															
FU	178	178	→															
FV	179	179	→															
FW	180	180	→															
FX	181	181	→															
FY	182	182	→															
FZ	183	183	→															
GA	184	184	→															
GB	185	185	→															
GC	186	186	→															
GD	187	187	→															
GE	188	188	→															
GF	189	189	→															
GG	190	190	→															
GH	191	191	→															
GI	192	192	→															
GJ	193	193	→															
GK	194	194	→															
GL	195	195	→															
GM	196	196	→															
GN	197	197	→															
GO	198	198	→															
GP	199	199	→															
GQ	200	200	→															
GR	201	201	→															
GS	202	202	→															
GT	203	203	→															
GU	204	204	→															
GV	205	205	→															
GW	206	206	→															
GX	207	207	→															
GY	208	208	→															
GZ	209	209	→															
HA	210	210	→															
HB	211	211	→															
HC	212	212	→															
HD	213	213	→															
HE	214	214	→															
HF	215	215	→															
HG	216	216	→															
HH	217	217	→															
HI	218	218	→															
HJ	219	219	→															
HK	220	220	→															
HL	221	221	→															
HM	222	222	→															
HN	223	223	→															
HO	224	224	→															
HP	225	225	→															
HQ	226	226	→															
HR	227	227	→															
HS	228	228	→															
HT	229	229	→															
HU	230	230	→															
HV	231	231	→															
HW	232	232	→															
HX	233	233	→															
HY	234	234	→															
HZ	235	235	→															
IA	236	236	→															
IB	237	237	→															
IC	238	238	→															
ID	239	239	→															
IE	240	240	→															
IF	241	241	→															
IG	242	242	→															
IH	243	243	→															
II	244	244	→															
IJ	245	245	→															
IK	246	246	→															
IL	247	247	→															
IM	248	248	→															
IN	249	249	→															
IO	250	250	→															
IP	251	251	→															
IQ	252	252	→															
IR	253	253	→															
IS	254	254	→															
IT	255	255	→															
IU	256	256	→															
IV	257	257	→															
IW	258	258	→															
IX	259	259	→															
IY	260	260	→															
IZ	261	261	→															
JA	262	262	→															
JB	263	263	→															
JC	264	264	→															
JD	265	265	→															
JE	266	266	→															
JF	267	267	→															
JG	268	268	→															
JH	269	269	→															
JI	270	270	→															
JJ	271	271	→															
JK	272	272	→															
JL	273	273	→															
JM	274	274	→															
JN	275	275	→															
JO	276	276	→															
JP	277	277	→															
IQ	278	278	→															
JR	279	279	→															
JS	280	280	→															
JT	281	281	→															
JU	282	282	→															
JV	283	283	→															
JW	284	284	→															
JX	285	285	→															

TABLE IV.A — Multiple sampling plans for normal inspection (Master table)
(see 4.9.3 and 4.9.4)
(Continued)

Sample size	Sample size	Lot size	Acceptable Quality Levels (normal inspection)																									
			0.010	0.015	0.025	0.040	0.060	0.10	0.15	0.25	0.40	0.60	1.0	1.5	2.5	4.0	6.0	10	15	25	40	60	100	150	250	400	600	1000
1	50	50	0	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25
2	100	100	0	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25
3	150	150	0	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25
4	200	200	0	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25
5	250	250	0	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25
6	300	300	0	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25
7	350	350	0	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25
8	400	400	0	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25
9	450	450	0	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25
10	500	500	0	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25
11	550	550	0	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25
12	600	600	0	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25
13	650	650	0	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25
14	700	700	0	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25
15	750	750	0	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25
16	800	800	0	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25
17	850	850	0	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25
18	900	900	0	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25
19	950	950	0	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25
20	1000	1000	0	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25

* Use first sampling plan below range. If sample size equals or exceeds lot size, use 100 percent inspection.
 * Use first sampling plan above range unless no preceding page, when necessary.
 * Appropriate number.
 * Inspection number.
 * Use second sampling plan for dimensionality, use multiple plus tables, when available.
 * Use sampling plan above range unless no preceding page, when necessary.
 * Acceptance on printed in this sample size.

TABLE IV-B — Multiple sampling plans for tightened inspection (Master table)

(see 4.9.3 and 4.9.4)

MIL-STD-105E

Sample size ratio before	Sample size	Code letter	Acceptable Quality Levels (tightened inspection)																									
			0.010	0.015	0.025	0.040	0.065	0.10	0.15	0.25	0.40	0.65	1.0	1.5	2.5	4.0	6.5	10	15	25	40	65	100	150	250	400	650	1000
			Ac	Re	Ac	Re	Ac	Re	Ac	Re	Ac	Re	Ac	Re	Ac	Re	Ac	Re	Ac	Re	Ac	Re	Ac	Re	Ac	Re	Ac	Re
1	5	A	→	→	→	→	→	→	→	→	→	→	→	→	→	→	→	→	→	→	→	→	→	→	→	→	→	→
2	10	B	→	→	→	→	→	→	→	→	→	→	→	→	→	→	→	→	→	→	→	→	→	→	→	→	→	→
3	15	C	→	→	→	→	→	→	→	→	→	→	→	→	→	→	→	→	→	→	→	→	→	→	→	→	→	→
4	20	D	→	→	→	→	→	→	→	→	→	→	→	→	→	→	→	→	→	→	→	→	→	→	→	→	→	→
5	25	E	→	→	→	→	→	→	→	→	→	→	→	→	→	→	→	→	→	→	→	→	→	→	→	→	→	→
6	30	F	→	→	→	→	→	→	→	→	→	→	→	→	→	→	→	→	→	→	→	→	→	→	→	→	→	→
7	35	G	→	→	→	→	→	→	→	→	→	→	→	→	→	→	→	→	→	→	→	→	→	→	→	→	→	→
8	40	H	→	→	→	→	→	→	→	→	→	→	→	→	→	→	→	→	→	→	→	→	→	→	→	→	→	→
9	45	I	→	→	→	→	→	→	→	→	→	→	→	→	→	→	→	→	→	→	→	→	→	→	→	→	→	→
10	50	J	→	→	→	→	→	→	→	→	→	→	→	→	→	→	→	→	→	→	→	→	→	→	→	→	→	→
11	55	K	→	→	→	→	→	→	→	→	→	→	→	→	→	→	→	→	→	→	→	→	→	→	→	→	→	→
12	60	L	→	→	→	→	→	→	→	→	→	→	→	→	→	→	→	→	→	→	→	→	→	→	→	→	→	→
13	65	M	→	→	→	→	→	→	→	→	→	→	→	→	→	→	→	→	→	→	→	→	→	→	→	→	→	→
14	70	N	→	→	→	→	→	→	→	→	→	→	→	→	→	→	→	→	→	→	→	→	→	→	→	→	→	→
15	75	O	→	→	→	→	→	→	→	→	→	→	→	→	→	→	→	→	→	→	→	→	→	→	→	→	→	→
16	80	P	→	→	→	→	→	→	→	→	→	→	→	→	→	→	→	→	→	→	→	→	→	→	→	→	→	→
17	85	Q	→	→	→	→	→	→	→	→	→	→	→	→	→	→	→	→	→	→	→	→	→	→	→	→	→	→
18	90	R	→	→	→	→	→	→	→	→	→	→	→	→	→	→	→	→	→	→	→	→	→	→	→	→	→	→
19	95	S	→	→	→	→	→	→	→	→	→	→	→	→	→	→	→	→	→	→	→	→	→	→	→	→	→	→
20	100	T	→	→	→	→	→	→	→	→	→	→	→	→	→	→	→	→	→	→	→	→	→	→	→	→	→	→

Use first sampling plan below given (refer to combination of table on following page, when necessary). If sample size exceeds lot or batch size, do 100 percent inspection.

→ Use first sampling plan above given.

Ac = Acceptance number

Re = Rejection number

Use corresponding single sampling plan for alternative, use multiple sampling plan below, when available.

Use corresponding double sampling plan for alternative, use multiple sampling plan below, when available.

Acceptance not permitted at this sample size

MULTIPLE
TIGHTENED

TABLE IV-B—Multiple sampling plans for tightened inspection (Master table)
(Continued)

(see 4.9.3 and 4.9.4)

Sample size code letter	Sample size	Code letter	Acceptable Quality Levels (tightened inspection)												
			0.010	0.025	0.050	0.100	0.150	0.250	0.400	0.650	1.000	1.500	2.500	4.000	6.500
A	32	32	→	→	→	→	→	→	→	→	→	→	→	→	→
	44	44	→	→	→	→	→	→	→	→	→	→	→	→	→
	56	56	→	→	→	→	→	→	→	→	→	→	→	→	→
	68	68	→	→	→	→	→	→	→	→	→	→	→	→	→
	80	80	→	→	→	→	→	→	→	→	→	→	→	→	→
B	50	50	→	→	→	→	→	→	→	→	→	→	→	→	→
	63	63	→	→	→	→	→	→	→	→	→	→	→	→	→
	76	76	→	→	→	→	→	→	→	→	→	→	→	→	→
	89	89	→	→	→	→	→	→	→	→	→	→	→	→	→
	102	102	→	→	→	→	→	→	→	→	→	→	→	→	→
C	80	80	→	→	→	→	→	→	→	→	→	→	→	→	→
	100	100	→	→	→	→	→	→	→	→	→	→	→	→	→
	125	125	→	→	→	→	→	→	→	→	→	→	→	→	→
	150	150	→	→	→	→	→	→	→	→	→	→	→	→	→
	175	175	→	→	→	→	→	→	→	→	→	→	→	→	→
D	125	125	→	→	→	→	→	→	→	→	→	→	→	→	→
	150	150	→	→	→	→	→	→	→	→	→	→	→	→	→
	175	175	→	→	→	→	→	→	→	→	→	→	→	→	→
	200	200	→	→	→	→	→	→	→	→	→	→	→	→	→
	225	225	→	→	→	→	→	→	→	→	→	→	→	→	→
E	200	200	→	→	→	→	→	→	→	→	→	→	→	→	→
	250	250	→	→	→	→	→	→	→	→	→	→	→	→	→
	300	300	→	→	→	→	→	→	→	→	→	→	→	→	→
	350	350	→	→	→	→	→	→	→	→	→	→	→	→	→
	400	400	→	→	→	→	→	→	→	→	→	→	→	→	→
F	315	315	→	→	→	→	→	→	→	→	→	→	→	→	→
	396	396	→	→	→	→	→	→	→	→	→	→	→	→	→
	490	490	→	→	→	→	→	→	→	→	→	→	→	→	→
	600	600	→	→	→	→	→	→	→	→	→	→	→	→	→
	720	720	→	→	→	→	→	→	→	→	→	→	→	→	→
G	500	500	→	→	→	→	→	→	→	→	→	→	→	→	→
	630	630	→	→	→	→	→	→	→	→	→	→	→	→	→
	790	790	→	→	→	→	→	→	→	→	→	→	→	→	→
	990	990	→	→	→	→	→	→	→	→	→	→	→	→	→
	1250	1250	→	→	→	→	→	→	→	→	→	→	→	→	→
H	800	800	→	→	→	→	→	→	→	→	→	→	→	→	→
	1000	1000	→	→	→	→	→	→	→	→	→	→	→	→	→
	1250	1250	→	→	→	→	→	→	→	→	→	→	→	→	→
	1575	1575	→	→	→	→	→	→	→	→	→	→	→	→	→
	2000	2000	→	→	→	→	→	→	→	→	→	→	→	→	→
I	1250	1250	→	→	→	→	→	→	→	→	→	→	→	→	→
	1575	1575	→	→	→	→	→	→	→	→	→	→	→	→	→
	2000	2000	→	→	→	→	→	→	→	→	→	→	→	→	→
	2500	2500	→	→	→	→	→	→	→	→	→	→	→	→	→
	3150	3150	→	→	→	→	→	→	→	→	→	→	→	→	→

Use first sampling plan in this series if sample size equals or exceeds lot or batch size, or 100 percent inspection.
Use first sampling plan above when lot or batch size falls between two plans, unless otherwise specified.
Acceptance number.
Inspection number.
Use corresponding single sampling plan for alternative, or multiple sampling plan later, where available.
Acceptance and rejection numbers are indicated in this sample plan.

MULTIPLE
TIGHTENED

TABLE V-A — Average Outgoing Quality Limit Factors for Normal Inspection (Single sampling)

(see 3.3)

Code Letter	Sample Size	Acceptable Quality Level																										
		0.010	0.015	0.025	0.040	0.065	0.10	0.15	0.25	0.40	0.65	1.0	1.5	2.5	4.0	6.5	10	15	25	40	65	100	150	250	400	650	1000	
A	2																											
B	3																											
C	5																											
D	8																											
E	13																											
F	20																											
G	32																											
H	50																											
J	80																											
K	125																											
L	200																											
M	315																											
N	500																											
P	800																											
Q	1250																											
R	2000																											

• Note: For the exact AOQL, the above values must be multiplied by (1 - $\frac{\text{Sample size}}{\text{Lot or Batch size}}$)

AOQL
NORMAL

TABLE V.B—Average Outgoing Quality Limit Factors for Tightened Inspection (Single sampling)

(see 3.3)

Code Letter	Sample size	Assessable Quality Level																										
		0.010	0.015	0.025	0.040	0.060	0.10	0.15	0.25	0.40	0.60	1.0	1.5	2.5	4.0	6.5	10	15	25	40	65	100	150	250	400	650	1000	
A	2																											
B	3																											
C	5																											
D	8																											
E	13																											
F	20																											
G	32																											
H	50																											
J	80																											
K	125																											
L	200																											
M	315																											
N	500																											
P	800																											
O	1250																											
R	2000																											
S	3150																											

Note: For the exact AOQL, the above values must be multiplied by (1 - $\frac{\text{Sample size}}{\text{Lot or Batch size}}$) (see 11.6)

TABLE VI-A—Limiting Quality (in percent defective) for which $P_d = 10$ Percent
(for Normal Inspection, Single sampling)

(see 4.11)

Code letter	Sample size	Acceptable Quality Level																
		0.010	0.015	0.025	0.040	0.065	0.10	0.15	0.25	0.40	0.65	1.0	1.5	2.5	4.0	6.5	10	
A	2																	
B	3																	
C	5														37	54	68	58
D	8																	
E	13																	54
F	20									11	16	25	18	27	36	44	42	
G	32																	
H	50																	34
J	80																	29
K	125																	24
L	200																	
M	315																	
N	500																	
P	800																	
Q	1250																	
R	2000																	

LQ (DEFECTIVES)
10.0%

TABLE VI-B—Limiting Quality (in defects per hundred units) for which $P_d = 10$ Percent
(for Normal Inspection, Single sampling)

(see 4.11)

Code letter	Sample size	Acceptable Quality Level																										
		0.010	0.015	0.025	0.040	0.065	0.10	0.15	0.25	0.40	0.65	1.0	1.5	2.5	4.0	6.5	10	15	25	40	65	100	150	250	400	650	1000	
A	2																											
B	3																											
C	5																											
D	8																											
E	13																											
F	20																											
G	32																											
H	50																											
J	80																											
K	125																											
L	200																											
M	315																											
N	500																											
P	800																											
Q	1250																											
R	2000																											

TABLE VII-A—Limiting Quality (in percent defective) for which $P_d = 5$ Percent
(for Normal Inspection, Single sampling)

(see 4.11)

Code letter	Sample size	Acceptable Quality Level																
		0.010	0.015	0.025	0.040	0.065	0.10	0.15	0.25	0.40	0.65	1.0	1.5	2.5	4.0	6.5	10	
A	2																	
B	3																78	
C	5													45	63			66
D	8																	60
E	13																	50
F	20																	46
G	32																	37
H	50																	32
J	80																	26
K	125																	24
L	200																	24
M	315																	24
N	500																	24
P	800																	24
Q	1250																	24
R	2000																	24

LQ (DEFECTIVES)
5.0%

TABLE VII-B—Limiting Quality (in defects per hundred units) for which $P_a = 5$ Percent
(for Normal Inspection, Single sampling)

(see 4.11)

Code letter	Sample size	Acceptable Quality Level																										
		0.010	0.015	0.025	0.040	0.065	0.10	0.15	0.25	0.40	0.65	1.0	1.5	2.5	4.0	6.5	10	15	25	40	65	100	150	250	400	650	1000	
A	2																											
B	3																											
C	5																											
D	6																											
E	13																											
F	20																											
G	32																											
H	50																											
J	80																											
K	125																											
L	200																											
M	315																											
N	500																											
P	800																											
Q	1250																											
H	2000																											

LQ (DEFECTS)
5%

TABLE VIII — Limit Numbers for Reduced Inspection

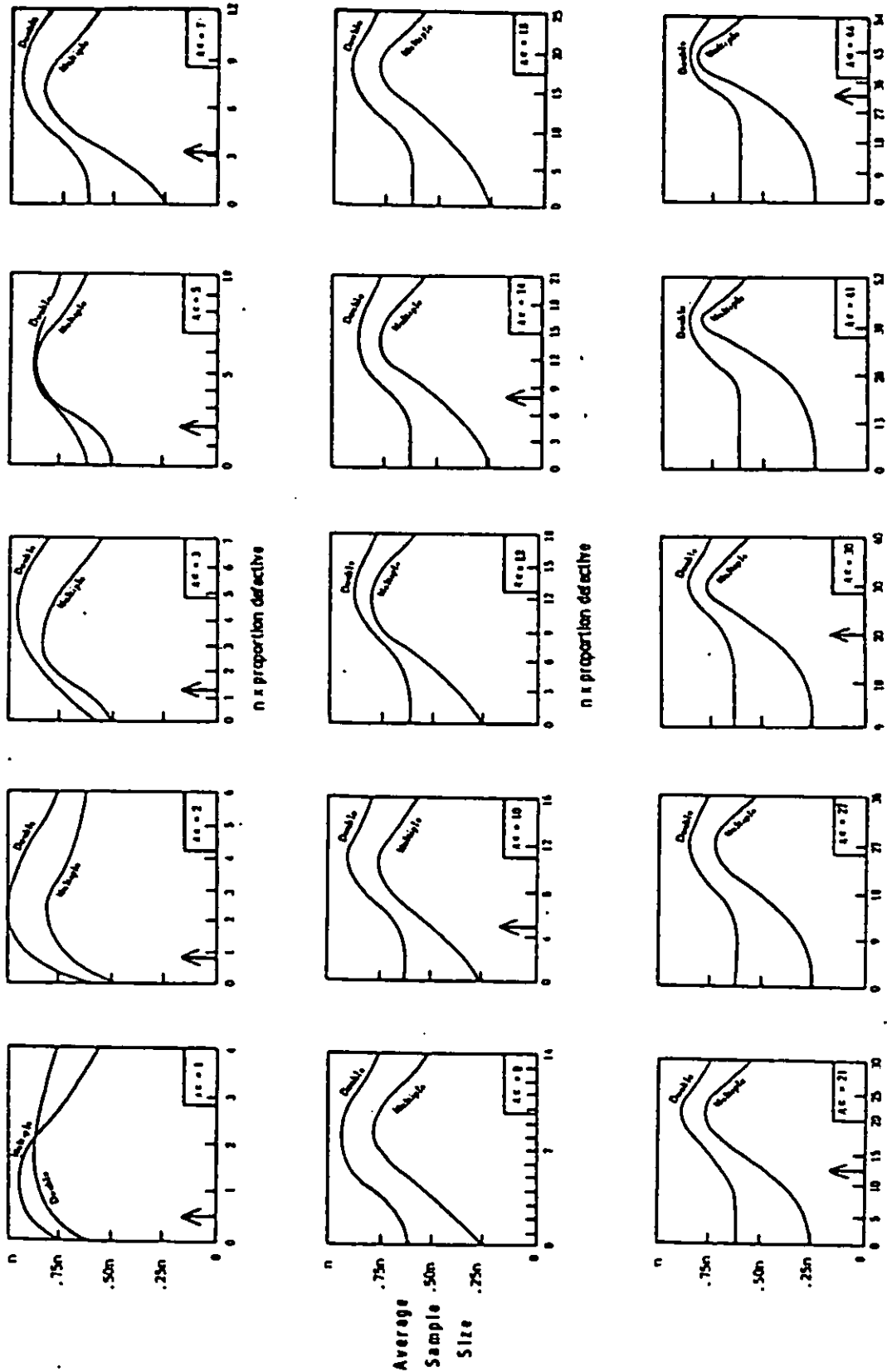
(see 4.7.3)

Number of sample units from lot or batches	Acceptable Quality Level																										
	0.010	0.015	0.025	0.040	0.065	0.10	0.15	0.25	0.40	0.65	1.0	1.5	2.5	4.0	6.5	10	15	25	40	65	100	150	250	400	650	1000	
20 - 29	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
30 - 49	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
50 - 79	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
80 - 129	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
130 - 199	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
200 - 319	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
320 - 499	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
500 - 799	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
800 - 1249	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
1250 - 1999	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
2000 - 3149	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
3150 - 19999	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
3000 - 7999	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
8000 - 12499	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
12500 - 19999	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
20000 - 31499	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
31500 & Over	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0

Decrease the number of sample units from the lot or lots or batches is not sufficient for reduced inspection for this AQL. In this instance more than ten lots or batches may be used for the calculations, provided that the lots or batches used are the most recent ones in sequence, that they have all been on normal inspection, and that none has been rejected while on original inspection.

TABLE IX—Average sample size curves for double and multiple sampling
(normal and tightened inspection)

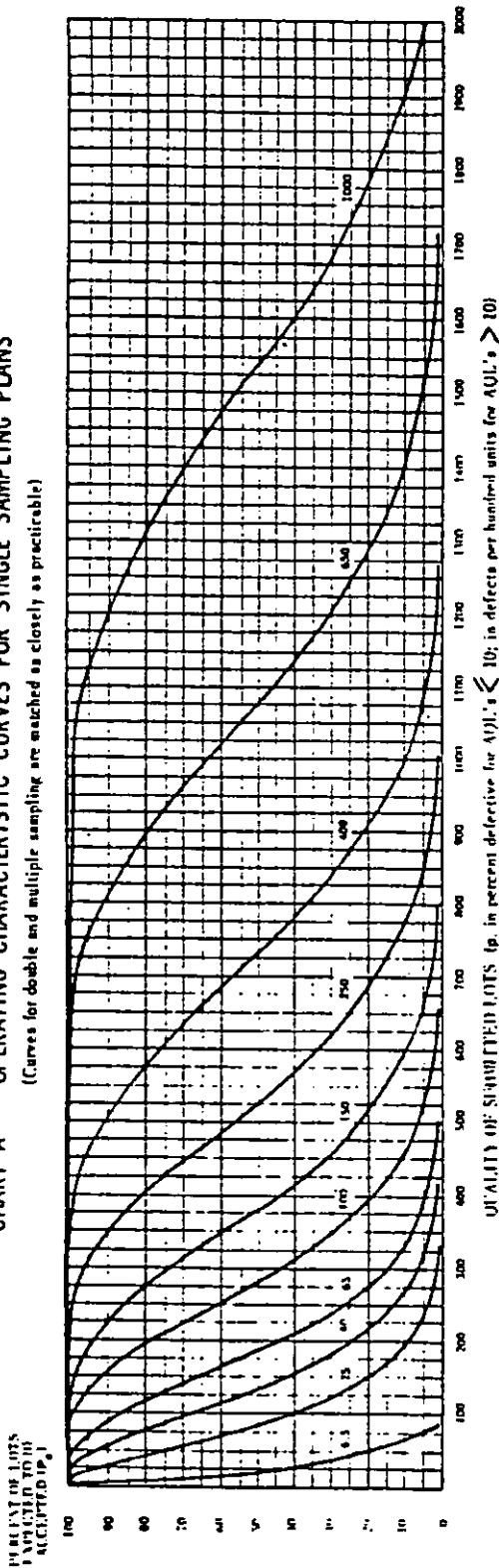
(see 4.12.2)



• • • Exponential single sample size
 Ac = Single sample acceptance number
 ↑ = AQL for normal inspection

TABLE X-A—Tables for sample size code letter: A

CHART A - OPERATING CHARACTERISTIC CURVES FOR SINGLE SAMPLING PLANS
(Curves for double and multiple sampling are matched as closely as practicable)



Note: Figures on curves are Acceptable Quality Levels (AQL's) for normal inspection.

TABLE X-A-1 - TABULATED VALUES FOR OPERATING CHARACTERISTIC CURVES FOR SINGLE SAMPLING PLANS

P ₀	Acceptable Quality Levels (normal inspection)													
	6.5	6.5	25	40	65	100	150	250	400	650	1000	1500	2000	
	p (in percent defective)													
99.0	0.503	7.41	21.8	41.2	69.3	89.3	145	239	305	374	517	629	859	977
95.0	2.56	17.8	40.9	68.3	131	199	272	351	432	515	684	745	995	1122
90.0	5.27	26.6	55.1	87.2	158	233	312	401	492	584	795	934	1214	1354
75.0	14.4	48.1	86.4	127	211	298	392	493	593	693	933	1083	1354	1533
50.0	29.3	83.9	134	184	284	383	483	583	683	783	1087	1248	1568	1728
25.0	69.3	135	196	253	371	484	540	651	761	870	1238	1409	1748	1916
10.0	68.4	194	266	334	464	569	650	770	889	1006	1335	1512	1862	2015
5.0	150	237	315	388	526	657	722	848	972	1094	1529	1718	2088	2270
1.0	230	332	420	502	655	800	870	1007	1141	1272	1529	1718	2088	2270
	X	X	40	65	100	150	X	250	X	400	X	650	X	1000
	Acceptable Quality Levels (tightened inspection)													

Note: Binomial distribution used for percent defective comparison; Poisson for defects per hundred units.

TABLE X-B—Tables for sample size code letter: B

CHART B - OPERATING CHARACTERISTIC CURVES FOR SINGLE SAMPLING PLANS

(Curves for double and multiple sampling are matched as closely as practicable)

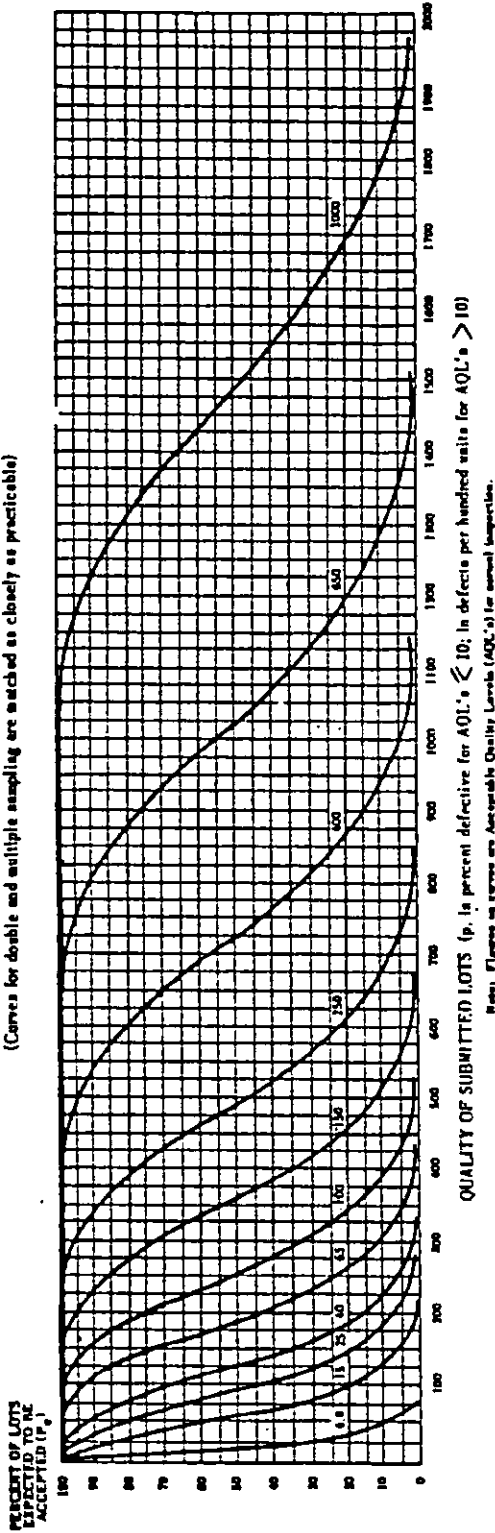


TABLE X-B-1 - TABULATED VALUES FOR OPERATING CHARACTERISTIC CURVES FOR SINGLE SAMPLING PLANS

P ₀	Acceptable Quality Levels (normal inspection)															
	4.0	6.5	100	150	250	400	650	1000	1500	2000	3000	4000	5000			
p (in percent defective)	p (in defects per hundred units)															
99.0	0.335	4.97	14.5	27.4	59.5	96.9	117	159	203	249	345	419	572	651	947	1029
95.0	1.71	11.8	27.3	45.5	87.1	133	157	206	256	308	415	496	663	748	1065	1152
90.0	3.45	17.7	36.7	50.2	105	155	181	234	288	343	456	541	716	804	1131	1222
75.0	9.14	32.0	57.6	84.5	141	199	228	287	347	406	530	623	809	903	1249	1344
50.0	20.6	55.9	89.1	122	189	256	289	356	422	489	622	722	922	1022	1389	1489
25.0	46.2	89.8	131	170	247	323	360	434	507	580	724	832	1045	1152	1539	1644
10.0	76.8	130	177	223	309	392	433	514	593	671	875	939	1165	1277	1643	1793
5.0	99.9	158	210	258	350	438	481	565	648	730	890	1008	1241	1356	1773	1886
1.0	154	221	280	335	437	533	580	671	761	848	1019	1115	1392	1513	1951	2069
6.5	6.5	25	40	65	100	150	250	400	650	1000	1500	2500	4000	6500	10000	15000

Note: Binomial distribution used for percent defective comparisons; Poisson for defects per hundred units.

TABLE X-C—Tables for sample size code letter: C

CHART C - OPERATING CHARACTERISTIC CURVES FOR SINGLE SAMPLING PLANS

(Curves for double and multiple sampling are matched as closely as practicable)

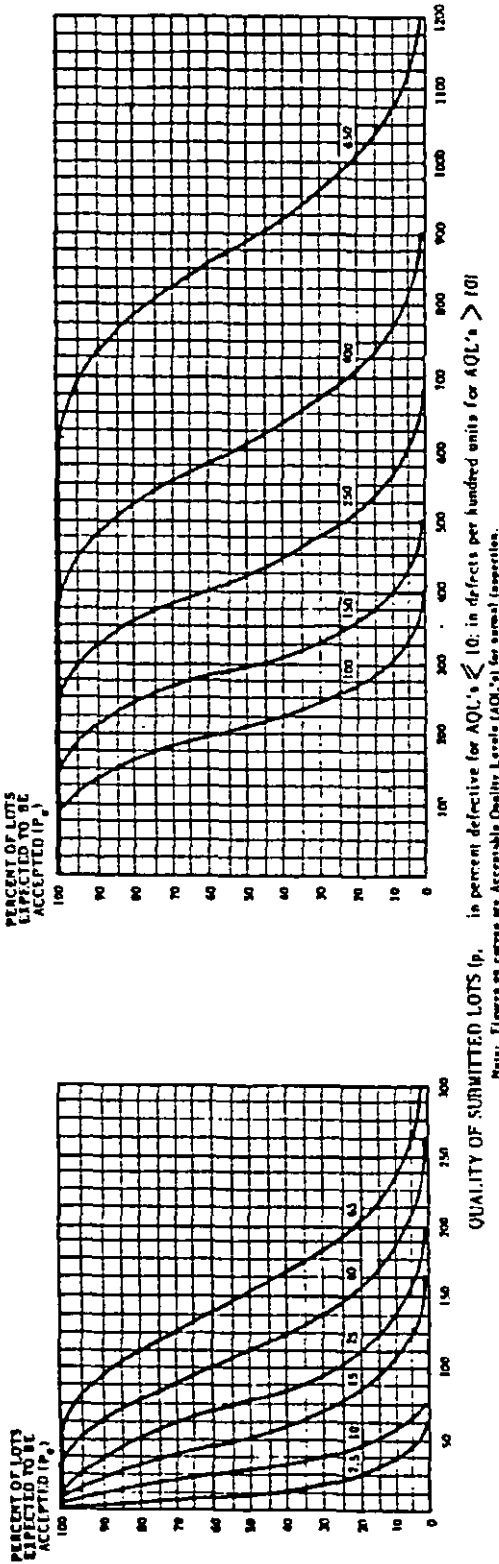


TABLE X-C-1 - TABULATED VALUES FOR OPERATING CHARACTERISTIC CURVES FOR SINGLE SAMPLING PLANS

P _a	Acceptable Quality Levels (normal inspection)																
	2.5	10	2.5	10	15	25	40	65	100	150	207	251	343	400	450	650	
	p (in percent defective)																
99.0	0.201	3.27	0.201	2.97	8.72	16.5	37.5	58.1	70.1	95.4	122	150	207	251	343	568	618
95.0	1.02	7.64	1.03	7.11	16.4	27.3	52.3	79.6	93.9	123	154	185	249	298	398	639	691
90.0	2.09	11.2	2.11	10.6	22.0	34.9	63.0	93.1	109	140	173	206	273	325	429	679	733
75.0	5.59	19.4	5.75	19.2	34.5	50.7	84.4	119	137	172	208	245	318	374	485	749	806
50.0	12.9	31.4	13.9	33.6	53.5	73.4	113	153	173	213	253	293	373	433	553	833	893
25.0	24.2	45.4	27.7	53.9	78.4	102	148	194	216	260	304	348	435	499	627	923	986
10.0	36.9	58.4	46.1	77.8	106	134	185	235	260	308	356	403	495	564	699	1010	1076
5.0	45.1	65.7	59.9	94.9	126	155	210	263	289	339	389	438	534	605	745	1064	1131
1.0	60.2	77.8	92.1	133	168	201	262	320	348	403	456	509	612	687	835	1171	1241
4.0	X	X	4.0	15	25	40	65	X	100	X	150	X	207	X	400	X	650
	Acceptable Quality Levels (tightened inspection)																

Note: Binomial distribution used for percent defective computations; Poisson for defects per hundred table.

TABLE X-C-2 - SAMPLING PLANS FOR SAMPLE SIZE CODE LETTER: C

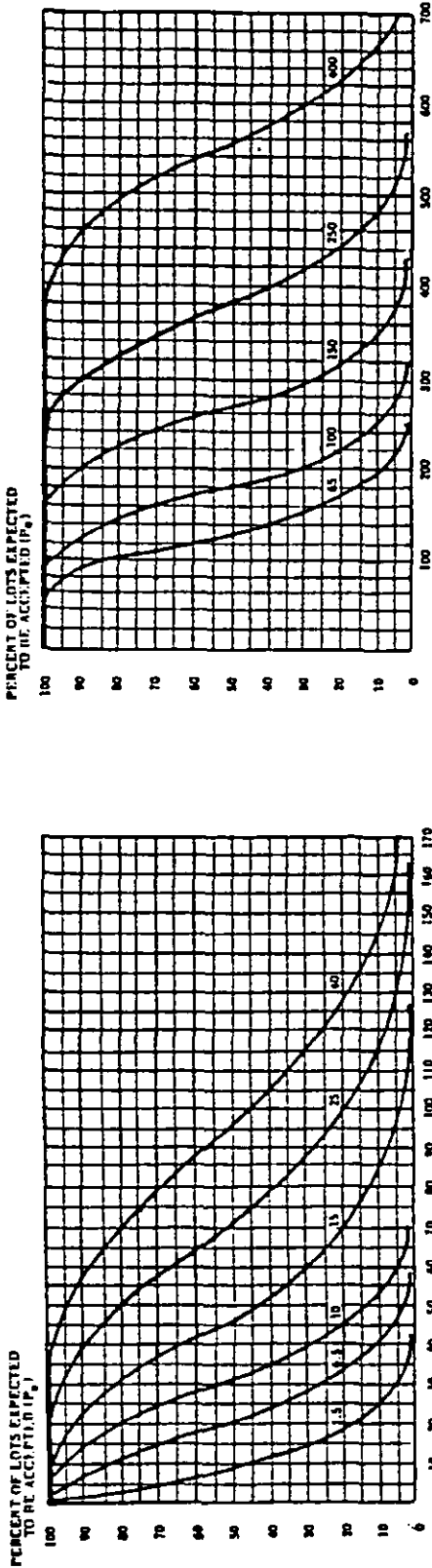
Type of sampling plan	Com- muni- cative sample size	Acceptable Quality Levels (lightened inspection)															
		Less than 2.5	2.5	4.0	6.5	10	15	25	40	65	100	150	250	400	650	1000	
		Ac	Re	Ac	Re	Ac	Re	Ac	Re	Ac	Re	Ac	Re	Ac	Re	Ac	Re
Single	5	▽	0	1													
Double	3	▽	•														
	6																
Multiple																	

- ▽ Use next subsequent sample size code letter for which acceptance and rejection numbers are available.
- Ac Acceptance number.
- Re Rejection number.
- Use single sampling plan above (or alternatively use code letter f)
- ++ Use double sampling plan above (or alternatively use code letter D)

TABLE X-D—Tables for sample size code letter: D

CHART D - OPERATING CHARACTERISTIC CURVES FOR SINGLE SAMPLING PLANS

(Curves for double and multiple sampling are watched as closely as practicable)



QUALITY OF SUBMITTED LOTS (p, in percent defective for AQL's ≤ 10 ; in defects per hundred units for AQL's > 10)

Note: Figures on curves are Acceptable Quality Levels (AQL's) for normal inspection.

TABLE X-D-1 - TABULATED VALUES FOR OPERATING CHARACTERISTIC CURVES FOR SINGLE SAMPLING PLANS

P _h	Acceptable Quality Levels (normal inspection)																		
	1.5	6.5	10	1.5	6.5	10	15	25	40	65	100	150	250	400					
	p (in percent defective)																		
99.0	0.126	1.97	6.08	0.126	1.86	5.45	10.3	22.3	36.3	43.8	59.6	76.2	93.5	129	157	215	244	355	386
95.0	0.639	4.64	11.1	0.641	4.44	10.2	17.1	32.7	49.8	58.7	77.1	96.1	116	156	186	249	281	399	432
90.0	1.31	6.88	14.7	1.32	6.65	13.8	21.8	39.4	58.2	67.9	87.8	108	129	171	203	266	301	424	458
75.0	3.53	12.1	22.1	3.60	12.0	21.6	31.7	52.7	74.5	85.5	108	130	153	199	234	303	339	468	504
50.0	8.30	20.1	32.1	8.66	21.0	33.4	45.9	70.9	95.9	108	133	158	183	233	271	346	383	521	558
25.0	15.9	30.3	43.3	17.3	33.7	49.0	63.9	92.8	121	135	163	190	217	272	312	392	432	577	617
10.0	25.0	40.6	53.8	28.8	48.6	66.5	83.5	116	147	162	193	222	252	309	352	437	479	631	672
5.0	31.2	47.1	60.0	37.4	59.3	78.7	96.9	131	164	180	212	243	274	334	378	465	509	665	707
1.0	43.8	59.0	70.7	57.5	83.0	105	126	164	200	218	252	285	318	382	429	522	568	732	776
	2.5	10	X	2.5	10	15	25	40	X	65	100	X	150	X	250	X	400	X	X
	Acceptable Quality Levels (tightened inspection)																		

Note: Binomial distribution used for percent defective computations; Poisson for defects per hundred units.

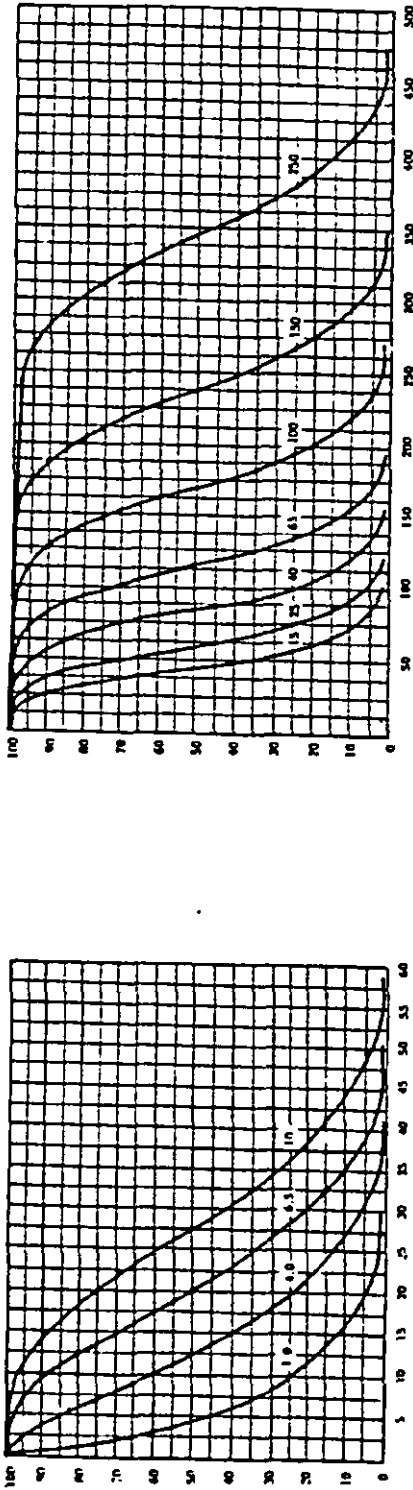
TABLE X-D-2 - SAMPLING PLANS FOR SAMPLE SIZE CODE LETTER: D

Type of sampling plan	Consecutive sample size	Acceptable Quality Levels (normal inspection)																		Consecutive sample size													
		Less than 1.5	1.5	2.5	4.0	6.5	10	15	25	40	65	100	150	250	400	Higher than 400																	
		Ac Re	Ac Re	Ac Re	Ac Re	Ac Re	Ac Re	Ac Re	Ac Re	Ac Re	Ac Re	Ac Re	Ac Re	Ac Re	Ac Re	Ac Re	Ac Re																
Single	0	▽	0 1																△														
	5	▽	•	Use code Letter	Use code Letter	Use code Letter	Use code Letter	Use code Letter	Use code Letter	Use code Letter	Use code Letter	Use code Letter	Use code Letter	Use code Letter	Use code Letter	Use code Letter	Use code Letter	Use code Letter	△														
Double	10																																
	2	▽	•	Use code Letter	Use code Letter	Use code Letter	Use code Letter	Use code Letter	Use code Letter	Use code Letter	Use code Letter	Use code Letter	Use code Letter	Use code Letter	Use code Letter	Use code Letter	Use code Letter	Use code Letter	△														
Multiple	4																																
	6																																
	8																																
	10																																
	12																																
	14																																
		Less than 2.5	2.5	4.0	6.5	10	15	25	40	65	100	150	250	400	Higher than 400	Acceptable Quality Levels (tightened inspection)																	

- △ = Use next preceding sample size code letter for which acceptance and rejection numbers are available.
- ▽ = Use next subsequent sample size code letter for which acceptance and rejection numbers are available.
- Ac = Acceptance number
- Re = Rejection number
- = Use single sampling plan above (or alternatively use code letter G)
- = Acceptance not permitted at this sample size.

TABLE X-E—Tables for sample size code letter: E

CHART E - OPERATING CHARACTERISTIC CURVES FOR SINGLE SAMPLING PLANS
(Curves for double and multiple sampling are matched as closely as practicable)



QUALITY OF SUBMITTED LOTS (p, in percent defective for AQL's ≤ 10 ; in defects per hundred units for AQL's > 10)
Note: Figures on curves are Acceptable Quality Levels (AQL's) for normal inspection.

TABLE X-E-1 - TABULATED VALUES FOR OPERATING CHARACTERISTIC CURVES FOR SINGLE SAMPLING PLANS

P ₀	Acceptable Quality Levels (normal inspection)																			
	p (in percent defectives)																			
	1.0	4.0	6.5	10	1.0	4.0	6.5	10	15	25	40	65	100	150	250					
90.0	0.077	1.18	3.58	6.75	0.077	1.15	3.35	6.33	13.7	22.4	27.0	36.7	46.9	57.5	79.6	96.7	132	150	219	238
95.0	0.394	2.81	6.60	11.3	0.395	2.73	6.29	10.5	20.1	30.6	36.1	47.5	59.2	71.1	95.7	115	153	173	246	266
90.0	0.807	6.17	8.80	14.2	0.810	4.09	8.48	13.4	24.2	35.8	41.8	54.0	66.5	79.2	105	125	165	185	261	282
75.0	2.19	7.41	13.4	19.9	2.21	7.39	13.3	19.5	32.5	45.8	52.6	66.3	80.2	94.1	122	144	187	208	288	310
50.0	5.19	12.6	20.0	27.5	5.33	12.9	20.6	28.2	43.6	59.0	66.7	82.1	97.4	113	144	167	213	236	321	344
25.0	10.1	19.4	28.0	36.1	10.7	20.1	30.2	39.3	57.1	74.5	83.1	100	117	134	167	192	241	266	355	379
10.0	16.2	26.8	36.0	44.4	17.7	29.9	40.9	51.4	71.3	90.5	100	119	137	155	190	217	269	295	388	414
5.0	20.6	31.6	41.0	49.5	23.0	36.5	48.4	59.6	80.9	101	111	130	150	168	205	233	266	313	409	435
1.0	29.8	41.3	50.6	58.8	35.4	51.1	64.7	77.3	101	123	134	155	176	196	235	264	321	349	450	477
1.5	6.5	10	X	X	1.5	6.5	10	15	25	X	40	X	65	X	100	X	150	X	250	X

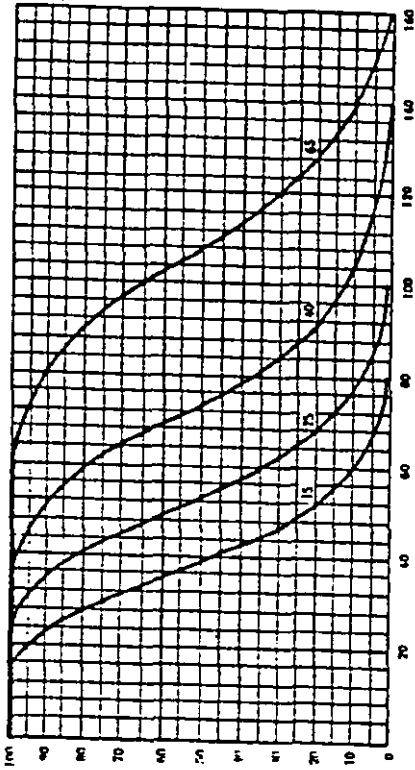
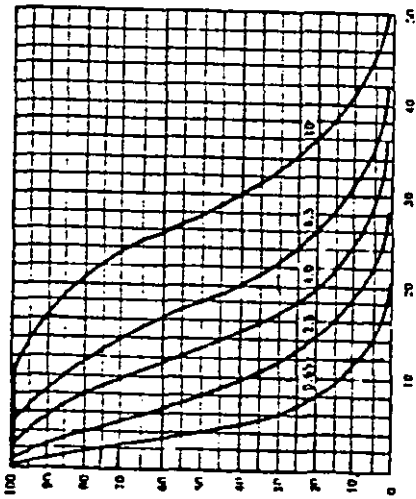
Note: Binomial distribution used for percent defective computations. Plots for defects per hundred units.

TABLE X-F—Tables for sample size code letter: F

CHART F - OPERATING CHARACTERISTIC CURVES FOR SINGLE SAMPLING PLANS

(Curves for double and multiple sampling are matched as closely as practicable)

PERCENT OF LOTS EXPECTED TO BE ACCEPTED (P_a)



QUALITY (p) QUANTITIES LISTED (p, in percent defective for AQL; $p \leq 10$; in defects per hundred units for AQL; $p > 10$)
 Note: Figures on curves are Acceptable Quality Levels (AQL's) for normal inspection.

TABLE X-F-1 - TABULATED VALUES FOR OPERATING CHARACTERISTIC CURVES FOR SINGLE SAMPLING PLANS

P _a	Acceptable Quality Levels (normal inspection)																	
	p (in defects per hundred units)																	
	0.65	2.5	4.0	6.5	10	15	20	25	30	35	40	45	50	55	60	65		
99.0	0.0502	0.759	2.27	4.36	9.75	0.0503	0.743	2.18	4.12	8.93	14.5	17.5	23.9	30.5	37.4	51.7	62.9	
95.0	0.256	1.81	4.22	7.14	14.0	0.256	1.78	4.09	6.83	13.1	19.9	23.5	30.8	38.4	46.2	62.2	74.5	
90.0	0.525	2.69	5.64	9.03	16.6	0.527	2.66	5.51	8.72	15.8	23.3	27.2	35.1	43.2	51.5	66.4	81.2	
75.0	1.43	4.81	8.70	12.8	21.6	1.44	4.81	8.64	12.7	21.1	29.8	34.2	43.1	52.1	61.2	79.5	93.4	
50.0	3.41	8.25	13.1	18.1	27.9	3.47	8.39	13.4	18.4	28.4	38.3	43.3	53.3	63.3	73.3	93.3	106	
25.0	6.70	12.9	18.7	24.2	34.8	6.93	13.5	19.6	25.5	37.1	48.4	54.0	65.1	76.1	87.0	109	125	
10.0	10.9	18.1	24.5	30.4	41.5	11.5	19.4	26.6	33.4	46.4	58.9	65.0	77.0	88.9	101	124	141	
5.0	13.9	21.6	28.3	34.4	45.6	15.0	23.7	31.5	38.8	52.6	65.7	72.2	84.8	97.2	109	133	151	
1.0	20.6	28.9	35.8	42.1	53.2	23.0	33.2	42.0	50.2	65.5	80.0	87.0	101	114	127	153	172	
1.0	4.0	6.5	10	15	20	25	30	35	40	45	50	55	60	65	70	75	80	85

Acceptable Quality Levels (tightened inspection)

Note: Binomial distribution used for percent defective computation; Poisson for defects per hundred units.

TABLE X-F-2 - SAMPLING PLANS FOR SAMPLE SIZE CODE LETTER: F

Type of sampling plan	Current sample size	Acceptable Quality Levels (normal inspection)																				Current letter sample size									
		Less than 0.65		0.65		1.0		1.5		2.5		4.0		6.5		10		15		25			40		65		Higher than 65				
		Ac	Re	Ac	Re	Ac	Re	Ac	Re	Ac	Re	Ac	Re	Ac	Re	Ac	Re	Ac	Re	Ac	Re		Ac	Re	Ac	Re	Ac	Re			
Single	20	▽	0	1																							△				
Double	13	▽	.																								△				
Multiple	5	▽	.																								△				
		10																													
		15																													
		20																													
		25																													
	30																														
	35																														
		Less than 1.0	1.0		1.5	2.5	4.0	6.5	10	15	25	40	65								25	40	65				Higher than 65				

Acceptable Quality Levels (tightened inspection)

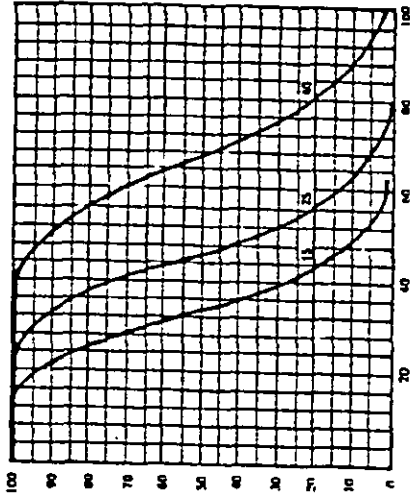
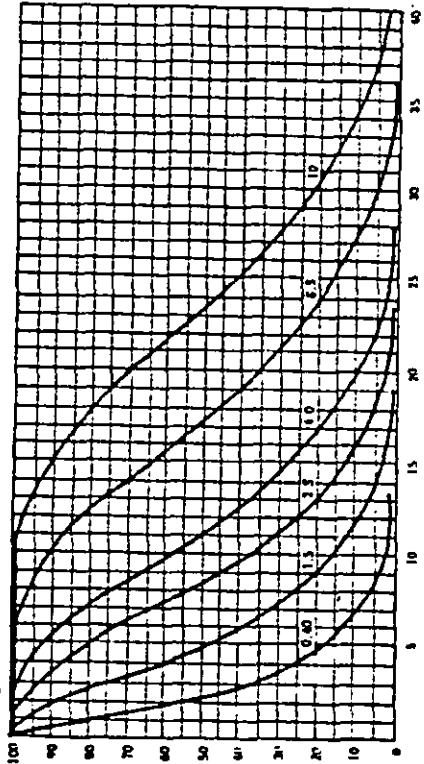
- △ = Use next preceding sample size code letter for which acceptance and rejection numbers are available.
- ▽ = Use next subsequent sample size code letter for which acceptance and rejection numbers are available.
- Ac = Acceptance number
- Re = Rejection number
- .
- = Use single sampling plan above (or alternatively use code letter J)
- = Acceptance not permitted at this sample size.

TABLE X-G—Tables for sample size code letter: G

CHART G - OPERATING CHARACTERISTIC CURVES FOR SINGLE SAMPLING PLANS

(Curves for double and multiple sampling plans are matched as closely as practicable)

PERCENT OF LOTS
EXPLICITLY OR
ACCEPTED (P_a)



QUALITY OF SUBMITTED LOTS (p, in percent defective for AQL's ≤ 10 ; in defects per hundred units for AQL's > 10)
 Note: Figures on curves are Acceptable Quality Levels (AQL's) for normal inspection.

TABLE X-G-1 - TABULATED VALUES FOR OPERATING CHARACTERISTIC CURVES FOR SINGLE SAMPLING PLANS

P _a	Acceptable Quality Levels (normal inspection)																
	p (in percent defective)					p (in defects per hundred units)											
	1.5	2.5	4.0	6.5	10	0.40	1.5	2.5	4.0	6.5	10	15	25	40			
99.0	0.471	1.40	2.67	5.88	9.73	0.0314	0.464	1.36	2.57	5.58	9.08	11.0	14.9	19.1	23.4	32.3	39.3
95.0	1.12	2.60	4.38	8.50	13.1	0.160	1.11	2.56	4.27	8.17	12.4	14.7	19.3	24.0	28.9	38.9	46.5
90.0	1.67	3.49	5.56	10.2	15.1	0.329	1.66	3.44	5.45	9.85	14.6	17.0	21.9	27.0	32.2	42.7	50.8
75.0	3.01	5.42	7.98	13.4	19.0	0.899	3.00	5.40	7.92	13.2	18.6	21.4	26.9	32.6	38.2	49.7	58.4
50.0	5.19	8.27	11.4	17.5	23.7	2.17	5.24	8.36	11.5	17.7	24.0	27.1	33.3	39.6	45.8	58.3	67.7
25.0	8.19	11.9	15.4	22.3	29.0	4.33	8.41	12.3	16.0	23.2	30.3	33.8	40.7	47.6	54.4	67.9	78.0
10.0	11.6	15.8	19.7	27.1	34.1	7.20	12.2	16.6	20.9	29.0	36.8	40.6	48.1	55.6	62.9	77.4	88.1
5.0	14.0	18.4	22.5	30.1	37.2	9.36	14.8	19.7	24.2	32.9	41.1	45.1	53.0	60.8	68.4	83.4	94.5
1.0	19.0	23.8	28.1	36.0	43.2	14.4	20.7	26.3	31.4	41.0	50.0	54.4	63.0	71.3	79.5	95.6	107
0.65	2.5	4.0	6.5	10	15	0.65	2.5	4.0	6.5	10	15	25	40	75	107	150	200

Note: Binomial distribution used for percent defective computations. Problems for defects per hundred units.

TABLE X-II-2 - SAMPLING PLANS FOR SAMPLE SIZE CODE LETTER: H

Type of sampling plan	Cumulative sample size	Acceptable Quality Levels (normal inspection)																		Cumulative sample size				
		Acceptable Quality Levels (tightened inspection)																						
		Less than 0.25	0.25	0.40	0.65	1.0	1.5	2.5	4.0	6.5	10	15	25	35	45	55	65	75	85		Higher than 25			
Ac	Re	Ac	Re	Ac	Re	Ac	Re	Ac	Re	Ac	Re	Ac	Re	Ac	Re	Ac	Re	Ac	Re	Ac	Re			
Single	50	▽	0	1																			△	50
	32	▽	.																					△
Double	64																							64
	13	▽	.																					△
Multiple	26																							26
	39																							39
	52																							52
	65																							65
	78																							78
	91																							91
			Less than 0.10	0.10	0.65	1.0	1.5	2.5	4.0	6.5	10	15	25	35	45	55	65	75	85	Higher than 25				

△ = Use next preceding sample size code letter for which acceptance and rejection numbers are available.
 ▽ = Use next subsequent sample size code letter for which acceptance and rejection numbers are available.
 Ac = Acceptance number
 Re = Rejection number
 . = Use single sampling plan above (or alternatively use code letter I)
 • = Acceptance not permitted at this sample size

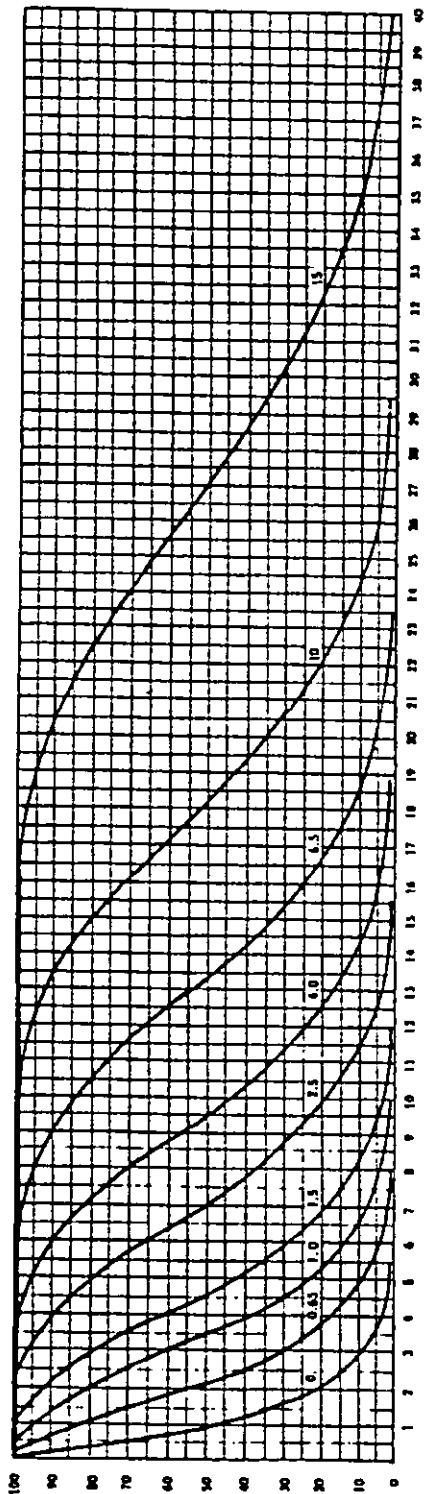


TABLE X-J—Tables for sample size code letter: J

CHART J - OPERATING CHARACTERISTIC CURVES FOR SINGLE SAMPLING PLANS

(Curves for double and multiple sampling are matched as closely as practicable)

PERCENT OF LOTS EXPECTED TO BE ACCEPTED (P_a)



QUALITY OF SUBMITTED LOTS (p, in percent defective for AQL's ≤ 10; in defects per hundred units for AQL's > 10)
 Note: Figures on curves are Acceptable Quality Levels (AQL's) for normal inspection.

TABLE X-J-1 - TABULATED VALUES FOR OPERATING CHARACTERISTIC CURVES FOR SINGLE SAMPLING PLANS

P _a	Acceptable Quality Levels (normal inspection)																				
	p (in percent defective)																				
	0.15	0.65	1.0	1.5	2.5	4.0	6.5	10	15	2.5	4.0	6.5	10	15	15						
99.0	0.0126	0.187	1.04	2.78	3.73	4.51	6.17	7.88	9.76	0.0126	0.186	0.545	1.03	2.23	3.63	4.38	5.96	7.62	9.35	12.9	15.7
95.0	0.0641	0.446	1.03	1.73	3.32	5.07	6.00	7.93	9.89	0.0641	0.444	1.02	1.71	3.27	4.98	5.87	7.71	9.61	11.6	15.6	18.6
90.0	0.132	0.667	1.39	2.20	3.99	5.91	6.90	8.95	11.0	0.132	0.665	1.38	2.18	3.94	5.02	6.79	8.78	10.8	12.9	17.1	20.3
75.0	0.359	1.201	2.16	3.18	5.30	7.50	8.61	10.9	13.2	0.359	1.20	2.16	3.17	5.27	7.45	8.55	10.8	13.0	15.3	19.9	23.4
50.0	0.863	2.09	3.33	4.57	7.06	9.55	10.8	13.3	15.8	0.866	2.10	3.34	4.59	7.09	9.59	10.8	13.3	15.8	18.3	23.3	27.1
25.0	1.72	3.33	4.84	6.30	9.14	11.9	13.3	16.0	18.6	1.73	3.37	4.90	6.39	9.28	12.1	13.5	16.3	19.0	21.7	27.2	31.2
10.0	2.84	4.78	6.52	8.16	11.3	14.3	15.7	18.6	21.4	2.88	4.86	6.65	8.35	11.6	14.7	16.2	19.3	22.2	25.2	30.9	35.2
5.0	3.68	5.79	7.66	9.41	12.7	15.8	17.3	20.3	23.2	3.74	5.93	7.87	9.69	13.1	16.4	18.0	21.2	24.3	27.4	33.4	37.8
1.0	5.59	8.01	10.1	12.0	15.6	18.9	20.5	23.6	26.6	5.76	8.30	10.5	12.6	16.4	20.0	21.8	25.2	28.5	31.8	38.2	42.9
0.25	1.0	1.5	2.5	4.0	6.5	10	15	25	40	0.25	1.0	1.5	2.5	4.0	6.5	10	15	25	40	65	100

Acceptable Quality Levels (tightened inspection)

Note: Binomial distribution used for percent defective computations; Poisson for defects per hundred units.

TABLE X-J-2 - SAMPLING PLANS FOR SAMPLE SIZE CODE LETTER: J

Type of sampling plan	Consecutive sample size	Acceptable Quality Levels (normal inspection)															Higher than 15										
		Less than 0.15		0.15		0.25		0.40		0.65		1.0		1.5		2.5		4.0		6.5		10		15			
		Ac	Re	Ac	Re	Ac	Re	Ac	Re	Ac	Re	Ac	Re	Ac	Re	Ac		Re	Ac	Re	Ac	Re	Ac	Re	Ac	Re	
Single	80	▽	0	1																						△	
Double	50	▽	.																							△	
Multiple	20	▽	.																							△	
	40																										
60																											
80																											
100																											
120																											
140																											
		Less than 0.25	0.25																							Higher than 15	

Acceptable Quality Levels (tightened inspection)

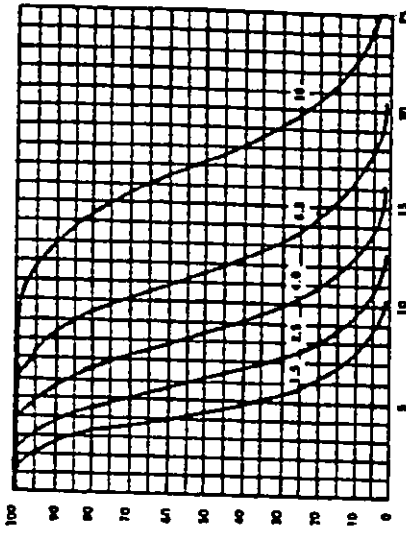
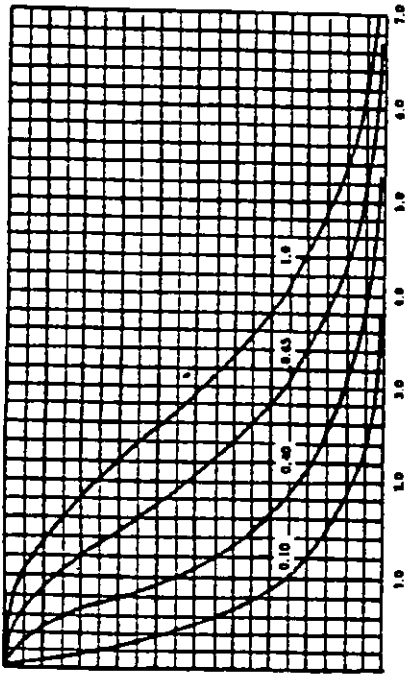
- △ Use next preceding sample size code letter for which acceptance and rejection numbers are available.
- ▽ Use next subsequent sample size code letter for which acceptance and rejection numbers are available.
- Ac Acceptance number
- Re Rejection number
- .
- Use single sampling plan above (or alternatively use code letter H)
- Acceptance not permitted at this sample size.

TABLE X-K — Tables for sample size code letter: K

CHART K - OPERATING CHARACTERISTIC CURVES FOR SINGLE SAMPLING PLANS
(Curves for double and multiple sampling are matched as closely as practicable)

PERCENT OF LOTS EXPECTED TO BE ACCEPTED (P_a)

PERCENT OF LOTS EXPECTED TO BE ACCEPTED (P_a)



QUALITY OF SHIPPED LOTS (p, in percent defective for AQL's ≤ 10 ; in defects per hundred units for AQL's > 10)

Note: Figures on curves are Acceptable Quality Levels (AQL's) for normal inspection.

TABLE X-K-1 - TABULATED VALUES FOR OPERATING CHARACTERISTIC CURVES FOR SINGLE SAMPLING PLANS

P _a	Acceptable Quality Levels (normal inspection)									
	0.10	0.40	0.65	1.0	1.5	2.5	4.0	6.5	10	10
p (in percent defective or defects per hundred units)	0.10	0.40	0.65	1.0	1.5	2.5	4.0	6.5	10	10
99.0	0.00004	0.119	0.349	0.659	1.43	2.32	2.81	3.82	4.88	6.28
95.0	0.0410	0.284	0.654	1.09	2.09	3.18	3.76	4.94	6.15	7.40
90.0	0.0843	0.425	0.882	1.40	2.52	3.72	4.35	5.62	6.92	8.24
75.0	0.230	0.769	1.382	2.03	3.38	4.76	5.47	6.90	8.34	9.79
50.0	0.555	1.34	2.14	2.94	4.54	6.14	6.94	8.53	10.1	11.7
25.0	1.11	2.15	3.14	4.09	5.94	7.75	8.64	10.4	12.2	13.9
10.0	1.84	3.11	4.26	5.34	7.42	9.82	10.4	12.3	14.2	16.1
5.0	2.40	3.80	5.04	6.20	8.41	10.5	11.5	13.6	15.6	17.5
1.0	3.68	5.31	6.72	8.04	10.5	12.8	18.3	16.1	18.3	20.4
0.15	0.63	1.0	1.5	2.5	4.0	6.5	10	10	10	10

Acceptable Quality Levels (tightened inspection)

Note: All values given in above table based on Poisson distribution as an approximation to the Binomial.

TABLE X-K-2 - SAMPLING PLANS FOR SAMPLE SIZE CODE LETTER: K

Type of sampling plan	Comm. letter sample size	Acceptable Quality Levels (normal inspection)																		Comm. letter sample size										
		Less than 0.10		0.10		0.15		0.25		0.40		0.65		1.0		1.5		2.5			4.0		6.5		10		Higher than 10			
		Ac	Re	Ac	Re	Ac	Re	Ac	Re	Ac	Re	Ac	Re	Ac	Re	Ac	Re	Ac	Re		Ac	Re	Ac	Re	Ac	Re	Ac	Re		
Single	125	∇	0	1					1	2	3	3	4	5	6	7	8	9	10	11	12	13	14	15	18	19	21	22	∆	
	60	∇	.		Use	Use	Use	0	2	0	3	1	4	2	5	3	7	3	7	5	9	6	10	7	11	9	14	11	16	∆
	160							1	2	3	4	5	6	7	8	9	11	12	12	13	15	16	18	19	23	21	26	27		
Multiple	32	∇	.		J	M	L	.	2	.	2	.	3	.	4	0	4	0	4	0	5	0	6	1	7	1	8	2	9	∆
	64							.	2	0	3	0	3	1	5	1	6	2	7	3	8	3	9	4	10	6	12	7	14	
	96							0	2	0	3	1	4	2	6	3	8	4	9	6	10	7	12	8	13	11	17	13	19	
	128							0	3	1	4	2	5	3	7	5	10	6	11	8	13	10	15	12	17	16	22	19	25	
	160							1	3	2	4	3	6	5	8	7	11	9	12	11	15	14	17	17	20	22	25	29		
	192							1	3	3	5	4	6	7	9	10	12	12	14	14	17	18	20	21	23	27	29	31	33	
224							2	3	4	5	6	7	9	10	13	14	14	15	18	19	21	22	25	26	32	33	37	38		
		Less than 0.15	0.15	0.25	0.40	0.65	1.0	1.5	2.5	4.0	6.5	10	Higher than 10	Acceptable Quality Levels (tightened inspection)																

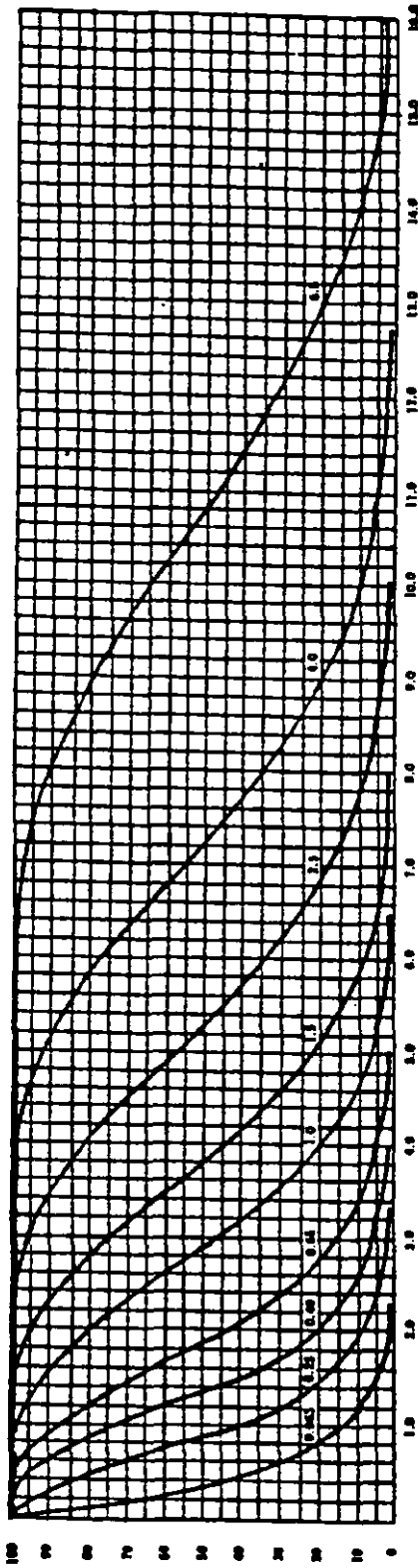
- ∆ • Use next preceding sample size code letter for which acceptance and rejection numbers are available.
- ∇ • Use next subsequent sample size code letter for which acceptance and rejection numbers are available.
- Ac • Acceptance number
- Re • Rejection number
- .
- Use single sampling plan above (or alternatively use code letter M)
- Acceptance not permitted at this sample size.

TABLE X-L—Tables for sample size code letter: L

CHART L - OPERATING CHARACTERISTIC CURVES FOR SINGLE SAMPLING PLANS

(Curves for double and multiple sampling are matched as closely as practicable)

PERCENT OF LOTS EXPECTED TO BE ACCEPTED (P_a)



QUALITY OF SUBMITTED LOTS (p , in percent defective for AQL's ≤ 10 ; in defects per hundred units for AQL's > 10)
 Note: Figures on curves are Acceptable Quality Levels (AQL's) for normal inspection.

TABLE X-L-1 - TABULATED VALUES FOR OPERATING CHARACTERISTIC CURVES FOR SINGLE SAMPLING PLANS

P_a	Acceptable Quality Levels (normal inspection)															
	0.065	0.25	0.40	0.65	1.0	1.5	2.5	4.0	6.5							
99.0	0.00901	0.075	0.218	0.412	0.693	1.45	1.75	2.39	3.05	3.74	5.17	6.29				
95.0	0.0256	0.178	0.409	0.683	1.31	1.99	2.35	3.08	3.84	4.62	6.22	7.45				
90.0	0.0527	0.266	0.531	0.872	1.58	2.33	2.72	3.51	4.32	5.15	6.84	8.12				
75.0	0.144	0.481	0.864	1.27	2.11	2.96	3.42	4.31	5.21	6.12	7.95	9.34				
50.0	0.347	0.839	1.34	1.84	2.84	3.84	4.33	5.33	6.33	7.33	9.33	10.8				
25.0	0.690	1.35	1.96	2.55	3.71	4.83	5.40	6.51	7.61	8.70	10.9	12.5				
10.0	1.15	1.94	2.66	3.34	4.64	5.89	6.50	7.70	8.89	10.1	12.4	14.1				
5.0	1.50	2.37	3.15	3.88	5.26	6.57	7.22	8.48	9.72	10.9	13.3	15.1				
1.0	2.30	3.32	4.20	5.02	6.55	8.00	8.70	10.1	11.4	12.7	15.3	17.2				
0.10	0.40	0.40	0.65	1.0	1.5	2.5	4.0	6.5	10.0	15.0	25.0	40.0				
	Acceptable Quality Levels (tightened inspection)															

Note: AQL values given in above table based on Poisson distribution as an approximation to the Binomial.

TABLE X-L-2 - SAMPLING PLANS FOR SAMPLE SIZE CODE LETTER: L

Type of sampling plan	Consecutive sample size	Acceptable Quality Levels (normal inspection)																		Consecutive sample size								
		Less than 0.065		0.065		0.10		0.15		0.25		0.40		0.65		1.0		1.5			2.5		4.0		6.5		Higher than 6.5	
		Ac	Re	Ac	Re	Ac	Re	Ac	Re	Ac	Re	Ac	Re	Ac	Re	Ac	Re	Ac	Re		Ac	Re	Ac	Re	Ac	Re	Ac	Re
Single	200	▽	0	1																							△	
	125																											
	250																											
Double	50	▽	.																									
	100																											
	150																											
Multiple	200																											
	250																											
	300																											
	350																											
		Less than 0.10	0.10	0.15	0.25	0.40	0.65	1.0	1.5	2.5	4.0	6.5	Higher than 6.5															

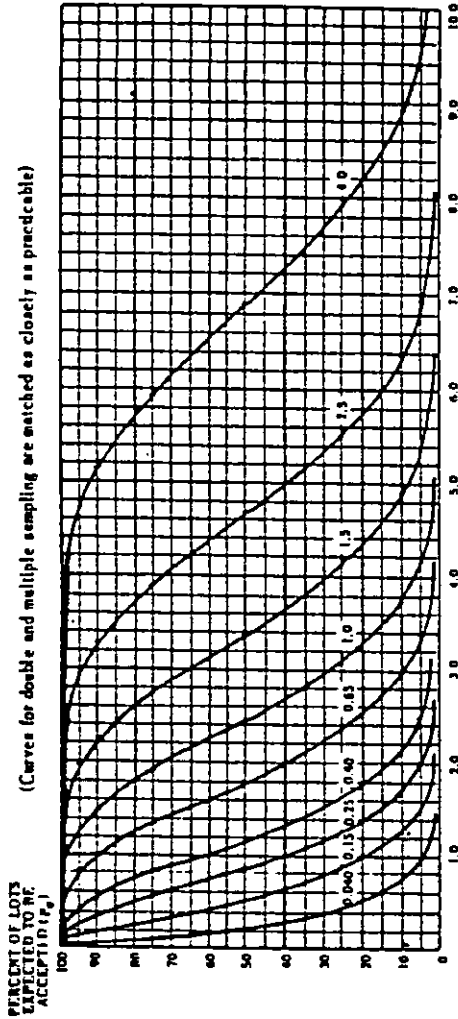
Acceptable Quality Levels (lightred inspection)

- △ Use next preceding sample size code letter for which acceptance and rejection numbers are available.
- ▽ Use next subsequent sample size code letter for which acceptance and rejection numbers are available.
- Ac Acceptance number
- Re Rejection number
- . Use single sampling plan above (or alternatively use code letter P)
- Acceptance not permitted at this sample size.

TABLE X-M — Tables for sample size code letter: M

CHART M - OPERATING CHARACTERISTIC CURVES FOR SINGLE SAMPLING PLANS

(Curves for double and multiple sampling are matched as closely as practicable)



QUALITY OF SUBMITTED LOTS (p, in percent defective for AQL's < 10; in defects per hundred units for AQL's > 10)
 Note: Figures on curves are Acceptable Quality Levels (AQL's) for normal inspection.

TABLE X-M-1 - TABULATED VALUES FOR OPERATING CHARACTERISTIC CURVES FOR SINGLE SAMPLING PLANS

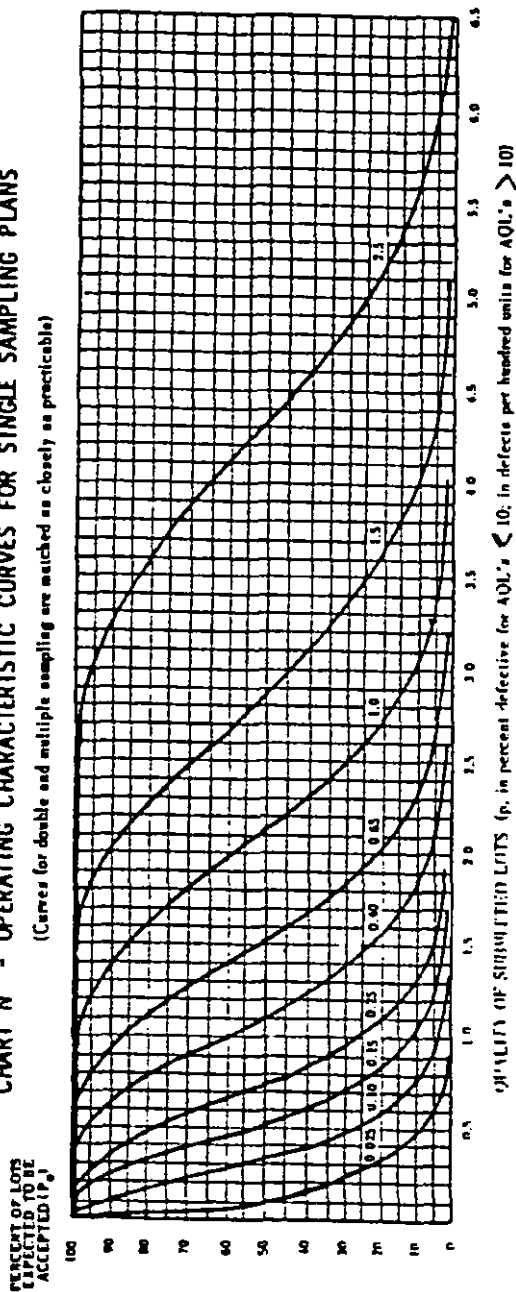
P _e	Acceptable Quality Levels (normal inspection)										
	0.15	0.25	0.40	0.65	1.0	1.5	2.5	4.0	10.0	10.0	
p (in percent defective or in defects per hundred units)	0.040	0.0472	0.0533	0.067	0.0923	0.111	0.151	0.194	2.37	3.28	3.99
	0.00319	0.0412	0.138	0.261	0.434	0.630	0.830	1.00	1.26	1.49	1.96
	0.0163	0.113	0.260	0.434	0.534	0.534	0.534	0.534	0.534	0.534	0.534
	0.0335	0.169	0.350	0.534	0.605	0.605	0.605	0.605	0.605	0.605	0.605
	0.0913	0.305	0.548	0.805	1.00	1.17	1.34	1.48	1.89	2.17	2.74
	0.220	0.533	0.849	1.17	1.60	2.07	2.43	2.75	3.39	4.02	4.66
	0.440	0.855	1.24	1.62	2.36	3.07	3.43	4.13	4.83	5.52	6.88
	0.731	1.23	1.69	2.12	2.94	3.74	4.13	4.89	5.64	6.39	7.92
	0.951	1.51	2.00	2.46	3.34	4.17	4.58	5.38	6.17	6.95	8.59
	1.46	2.11	2.67	3.19	4.16	5.08	6.40	7.74	8.08	9.71	10.9
	0.065	0.25	0.40	0.65	1.0	1.5	2.5	4.0	6.0	8.0	10.0
	Acceptable Quality Levels (tightened inspection)										

Note: All values given in above table based on Poisson distribution as an approximation to the Binomial.

TABLE X-N—Tables for sample size code letter: N

CHART N - OPERATING CHARACTERISTIC CURVES FOR SINGLE SAMPLING PLANS

(Curves for double and multiple sampling are matched as closely as practicable)



QUALITY OF SUBMITTED LOTS (p, in percent defective for AQL's ≤ 10 ; in defects per hundred units for AQL's > 10)

Note: Figures on curves are Acceptable Quality Levels (AQL's) for normal inspection.

TABLE X-N-1 - TABULATED VALUES FOR OPERATING CHARACTERISTIC CURVES FOR SINGLE SAMPLING PLANS

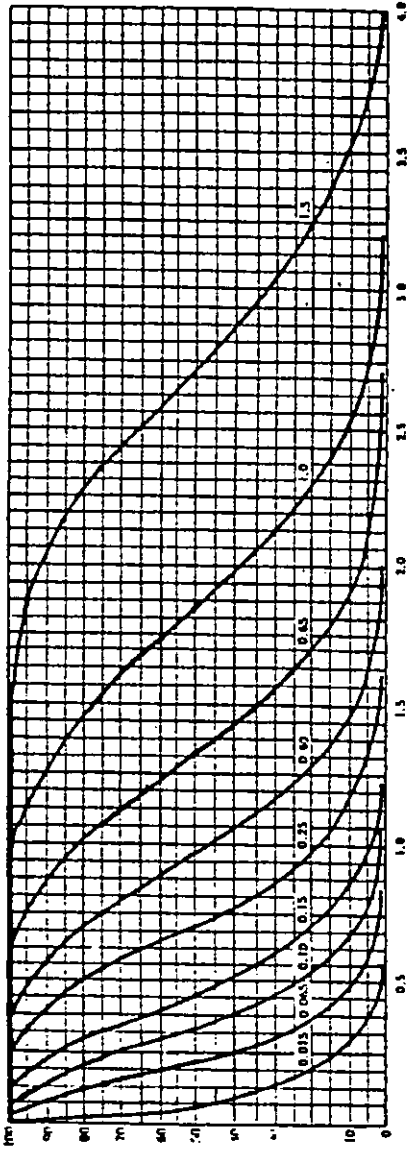
P _e	Acceptable Quality Levels (normal inspection)											
	0.025	0.10	0.15	0.25	0.40	0.65	1.0	1.5	2.5	3.5	4.5	
	p (in percent defective or in defects per hundred units)											
99.0	0.00201	0.0297	0.0872	0.165	0.357	0.581	0.701	0.954	1.22	1.50	2.07	2.51
95.0	0.0103	0.211	0.164	0.273	0.523	0.796	0.939	1.23	1.54	1.85	2.49	2.98
90.0	0.0211	0.106	0.220	0.349	0.630	0.931	1.09	1.40	1.73	2.06	2.73	3.25
75.0	0.0575	0.192	0.345	0.507	0.844	1.19	1.37	1.72	2.08	2.45	3.18	3.74
50.0	0.139	0.336	0.535	0.734	1.13	1.53	1.73	2.13	2.53	2.93	3.73	4.33
25.0	0.277	0.539	0.784	1.02	1.48	1.94	2.16	2.60	3.04	3.48	4.35	4.99
10.0	0.461	0.776	1.06	1.34	1.85	2.35	2.60	3.08	3.56	4.03	4.95	5.64
5.0	0.599	0.949	1.26	1.55	2.10	2.63	2.89	3.39	3.89	4.38	5.34	6.05
1.0	0.921	1.33	1.68	2.01	2.62	3.20	3.48	4.03	4.56	5.09	6.12	6.87
0.040	0.15	0.25	0.40	0.65	1.0	1.5	2.0	2.5	3.0	3.5	4.0	4.5
	Acceptable Quality Levels (tightened inspection)											

Note: All values given in above table based on Poisson distribution as an approximation to the Binomial

TABLE X-P — Tables for sample size code letter: P

CHART P - OPERATING CHARACTERISTIC CURVES FOR SINGLE SAMPLING PLANS

(Curves for double and multiple sampling are matched as closely as practicable)



QUALITY OF SUBMITTED LOTS (p) is percent defective for AQL's < 10; in defects per hundred units for AQL's > 10
 Note: Figures on curves are Acceptable Quality Levels (AQL's) for normal inspection.

TABLE X-P-1 - TABULATED VALUES FOR OPERATING CHARACTERISTIC CURVES FOR SINGLE SAMPLING PLANS

P _a	Acceptable Quality Levels (normal inspection)											
	0.015	0.045	0.10	0.15	0.25	0.40	0.65	1.0	1.5	2.0	2.5	
	p (in percent defective or defects per hundred units)											
99.0	0.00126	0.0186	0.0345	0.103	0.223	0.363	0.438	0.596	0.752	0.935	1.29	1.57
95.0	0.00641	0.0444	0.102	0.171	0.327	0.498	0.587	0.771	0.961	1.16	1.56	1.86
90.0	0.0132	0.0665	0.138	0.218	0.394	0.582	0.679	0.878	1.08	1.29	1.71	2.03
75.0	0.0360	0.120	0.216	0.317	0.527	0.745	0.855	1.08	1.30	1.53	1.99	2.34
50.0	0.0666	0.210	0.334	0.459	0.709	0.959	1.08	1.33	1.58	1.83	2.33	2.71
25.0	0.173	0.337	0.490	0.639	0.928	1.21	1.35	1.63	1.90	2.17	2.72	3.12
10.0	0.288	0.486	0.665	0.835	1.16	1.47	1.62	1.93	2.22	2.52	3.09	3.52
5.0	0.374	0.593	0.787	0.969	1.31	1.64	1.80	2.12	2.43	2.74	3.34	3.78
1.0	0.576	0.830	1.05	1.26	1.64	2.00	2.18	2.52	2.85	3.18	3.82	4.29
0.025	0.10	0.10	0.15	0.25	0.40	0.65	1.0	1.5	2.0	3.0	4.5	6.0
	Acceptable Quality Levels (tightened inspection)											

Note: All values given in above table based on Poisson distribution as an approximation to the Binomial.

TABLE X-P-2 - SAMPLING PLANS FOR SAMPLE SIZE CODE LETTER: P

Type of sampling plan	Comme- failure sample size	Acceptable Quality Levels (normal inspection)																Comme- failure sample size										
		0.010		0.015		0.025		0.040		0.065		0.10		0.15		0.25			0.40		0.65		1.0		1.5		Higher than 1.5	
		Ac	Re	Ac	Re	Ac	Re	Ac	Re	Ac	Re	Ac	Re	Ac	Re	Ac	Re		Ac	Re	Ac	Re	Ac	Re	Ac	Re	Ac	Re
Single	800	▽	0	1	0	1	1	2	3	3	4	5	6	7	8	9	10	11	12	13	14	15	18	19	21	22	△	
	500	▽			Use code Letter	Use code Letter	Use code Letter	Use code Letter	Use code Letter	Use code Letter	Use code Letter	Use code Letter	Use code Letter	Use code Letter	Use code Letter	Use code Letter	Use code Letter	Use code Letter	Use code Letter	Use code Letter	Use code Letter	Use code Letter	Use code Letter	Use code Letter	Use code Letter	Use code Letter	Use code Letter	Use code Letter
	1000																											
Double	200	▽																										
	400																											
	600																											
Multiple	800																											
	1000																											
	1200																											
	1400																											
	Less than 0.025																											
	Higher than 1.5																											

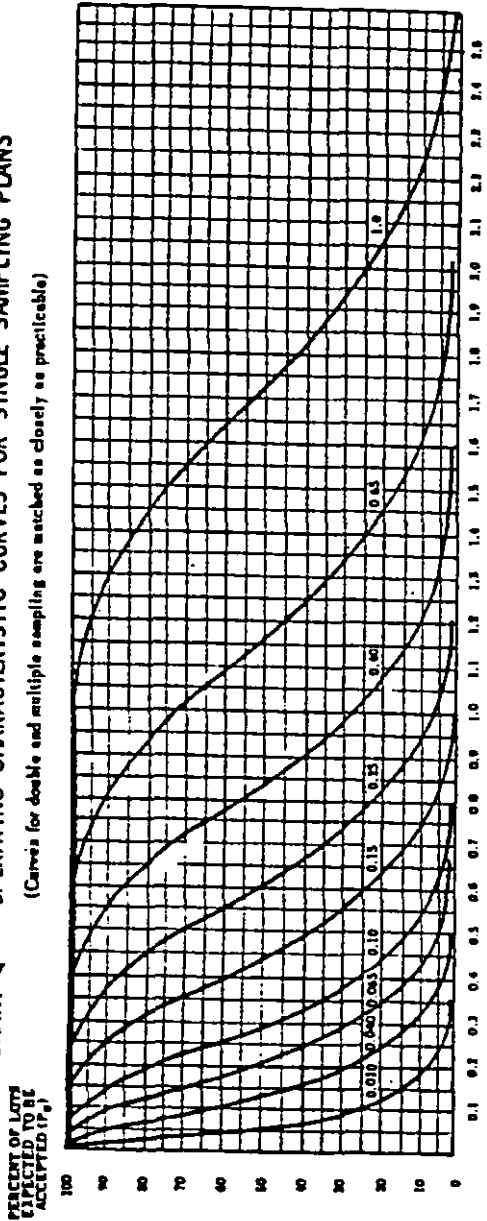
Acceptable Quality Levels (tightened inspection)

- △ Use next preceding sample size code letter for which acceptance and rejection numbers are available.
- ▽ Use next subsequent sample size code letter for which acceptance and rejection numbers are available.
- Ac Acceptance number.
- Re Rejection number.
- Use single sampling plan above.
- Acceptance not permitted at this sample size.



TABLE X-Q — Tables for sample size code letter: Q

CHART Q - OPERATING CHARACTERISTIC CURVES FOR SINGLE SAMPLING PLANS
(Curves for double and multiple sampling are matched as closely as practicable)



Note: Figures in curves are Acceptable Quality Levels (AQL's) for normal inspection.

TABLE X-Q-1 - TABULATED VALUES FOR OPERATING CHARACTERISTIC CURVES FOR SINGLE SAMPLING PLANS

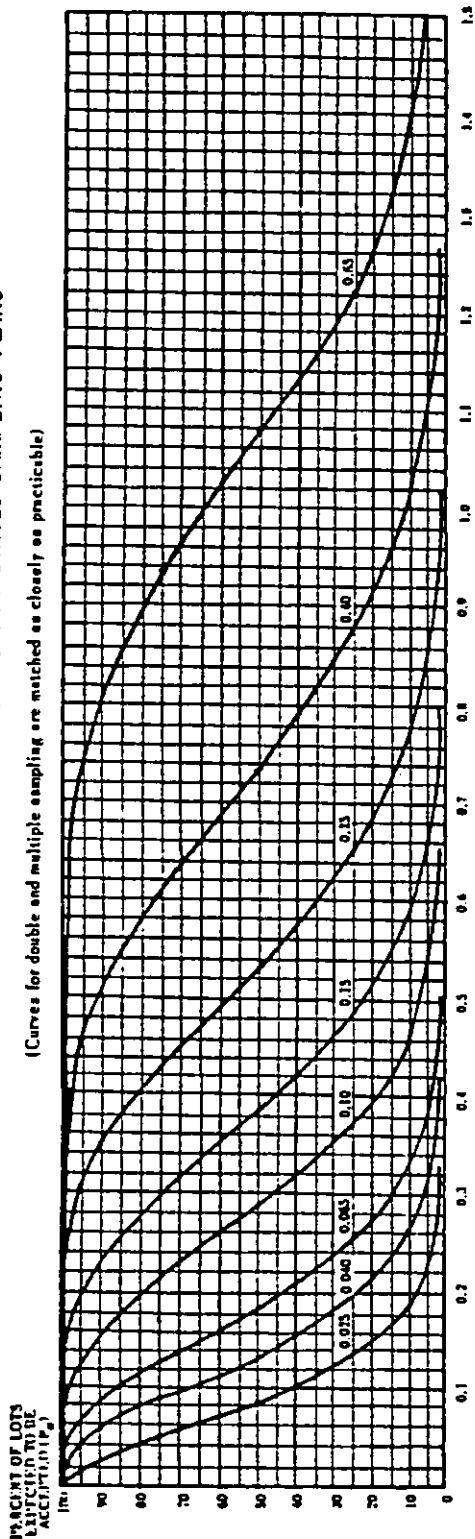
P _a	Acceptable Quality Levels (normal inspection)											
	0.010	0.040	0.065	0.10	0.15	0.25	0.40	0.65	1.0	1.0	1.0	
	p (in percent defective or defects per hundred units)											
99.0	0.000804	0.0119	0.0349	0.0659	0.143	0.232	0.281	0.382	0.488	0.598	0.828	1.01
95.0	0.00410	0.0284	0.0654	0.109	0.209	0.318	0.376	0.494	0.615	0.740	0.995	1.19
90.0	0.00843	0.0425	0.0882	0.140	0.252	0.372	0.435	0.562	0.692	0.824	1.09	1.30
75.0	0.0230	0.0769	0.138	0.203	0.339	0.476	0.547	0.690	0.834	0.979	1.27	1.49
50.0	0.0515	0.134	0.214	0.294	0.454	0.614	0.694	0.853	1.01	1.17	1.49	1.73
25.0	0.111	0.215	0.316	0.409	0.594	0.775	0.864	1.04	1.22	1.39	1.74	2.00
10.0	0.184	0.311	0.426	0.534	0.742	0.942	1.04	1.23	1.42	1.61	1.98	2.25
5.0	0.240	0.380	0.504	0.620	0.841	1.05	1.15	1.36	1.56	1.75	2.14	2.42
1.0	0.368	0.531	0.672	0.804	1.05	1.28	1.39	1.61	1.83	2.04	2.45	2.75
0.015	0.065	0.10	0.15	0.25	0.40	0.65	1.0	1.61	2.45	3.75	5.45	7.75
	Acceptable Quality Levels (lightened inspection)											
	0.010	0.040	0.065	0.10	0.15	0.25	0.40	0.65	1.0	1.0	1.0	1.0

Note: All values given in above table based on Poisson distribution as an approximation to the Binomial.

TABLE X-R—Tables for sample size code letter: R

CHART R - OPERATING CHARACTERISTIC CURVES FOR SINGLE SAMPLING PLANS

(Curves for double and multiple sampling are matched as closely as practicable)



NUMBER OF SUBMITTED LOTS (p = in percent defective for AQL's < 10; in defects per hundred units for AQL's > 10)
 Note: Figures on curves are Acceptable Quality Levels (AQL's) for normal inspection.

TABLE X-R-1 - TABULATED VALUES FOR OPERATING CHARACTERISTIC CURVES FOR SINGLE SAMPLING PLANS

P _a	Acceptable Quality Levels (normal inspection)										
	0.025	0.040	0.065	0.10	0.15	0.25	0.40	0.65			
p (in percent defective or defects per hundred units)											
99.0	0.00743	0.0218	0.0412	0.0892	0.165	0.175	0.239	0.305	0.374	0.517	0.629
95.0	0.0178	0.0409	0.0683	0.131	0.199	0.235	0.309	0.384	0.462	0.622	0.745
90.0	0.0266	0.0551	0.0872	0.158	0.233	0.272	0.351	0.432	0.515	0.694	0.812
75.0	0.0481	0.0864	0.127	0.211	0.298	0.342	0.431	0.521	0.612	0.795	0.934
50.0	0.0839	0.134	0.181	0.284	0.383	0.433	0.533	0.633	0.733	0.933	1.08
25.0	0.135	0.196	0.255	0.371	0.484	0.540	0.651	0.761	0.870	1.09	1.25
10.0	0.194	0.266	0.334	0.464	0.589	0.650	0.770	0.889	1.01	1.24	1.41
5.0	0.237	0.315	0.388	0.526	0.657	0.722	0.848	0.972	1.09	1.33	1.51
1.0	0.332	0.420	0.502	0.655	0.800	0.870	1.02	1.14	1.27	1.53	1.72
0.040	0.065	0.10	0.15	0.25	0.40	0.65	1.0	1.5	2.5	4.0	6.5
Acceptable Quality Levels (lightened inspection)											

Note: All values given in above table based on Poisson distribution as an approximation to the Binomial.

TABLE X-S—Tables for sample size code letter: S

Type of sampling plan	Cumulative sample size	Acceptable Quality Level (normal inspection)	
		Ac	Re
Single	3150	1	2
	2000	0	2
Double	4000	1	2
	800	#	2
Multiple	1600	#	2
	2400	0	2
	3200	0	3
	4000	1	3
	4800	1	3
	5600	2	3
		0.025	
		Acceptable Quality Level (tightened inspection)	

Ac = Acceptance number
 Re = Rejection number
 # = Acceptance not permitted at this sample size.

6. NOTES

6.1 Intended Use. Sampling procedures and tables for inspection by attributes are intended to be used in the acquisition of Defense material.

6.2 Subject Term (Key Word) Listing.

Acceptable Quality Level (AQL)

Average Outgoing Quality (AOQ)

Defect

Defective

Lot or Batch

Process Average

Sample

Sampling Plan

Unit of Product

6.3 Changes from Previous Issue. Vertical lines or asterisks are not used in this revision to identify changes with respect to the previous issue due to the extensiveness of the changes.

MIL-STD-105E

CONCLUDING MATERIAL

Custodians:

Army - AR
Navy - OS
Air Force - 23

Preparing Activity:

Army - AR

Review Activities:

Army - MI, EA, TE, AV, ER
Navy - AS, EC, MC, OM, SA,
SH, TD, YD
DLA - ES, GS, SS
OSD - IP, SO

(Project QCIC-0085)

User Activities:

Army - ME
DLA - ES, SS

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