

Australian Standard™

**Sampling procedures for inspection by
attributes**

**Part 2: Sampling plans indexed by
limiting quality (LQ) for isolated lot
inspection**

This Australian Standard was prepared by Committee QR-008, Quality Systems. It was approved on behalf of the Council of Standards Australia on 26 May 2003 and published on 28 July 2003.

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- Australian Chamber of Commerce and Industry
- Australian Industry Group
- Australian Information Industry Association
- Australian Institute of Petroleum
- Australian Organisation for Quality
- Bureau of Steel Manufacturers of Australia
- Certification Bodies (Australia)
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STANDARDS AUSTRALIA

RECONFIRMATION

OF

AS 1199.2—2003

Sampling procedures for inspection by attributes

Part 2: Sampling plans indexed by limiting quality (LQ) for isolated lot inspection

RECONFIRMATION NOTICE

Technical Committee QR-008 has reviewed the content of this publication and in accordance with Standards Australia procedures for reconfirmation, it has been determined that the publication is still valid and does not require change.

Certain documents referenced in the publication may have been amended since the original date of publication. Users are advised to ensure that they are using the latest versions of such documents as appropriate, unless advised otherwise in this Reconfirmation Notice.

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NOTES

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PREFACE

This Standard was prepared by the Standards Australia Committee QR-008, Quality Systems.

This Standard is identical with, and has been reproduced from ISO 2859-2:1985, *Sampling procedures for inspection by attributes, Part 2: Sampling plans indexed by limiting quality (LQ) for isolated lot inspection*.

The objective of this Standard is to establish LQ sampling plans and procedures for inspection by attributes compatible with ISO 2859-1 that can be used when the switching rules given in ISO 2859-1 are not applied, when lots are of an isolated nature.

As this Standard is reproduced from an international Standard, the following applies:

- (a) Its number appears on the cover and title page while the international Standard number appears only on the cover.
- (b) A full point substitutes for a comma when referring to a decimal marker.

The International Organization for Standardization's Committee TC 69 is currently in the process of updating the ISO 2859 series to bring the older documents into line with Parts 1 and 4. Where any inconsistency arises between the sections of this series of Standards, the more recently published document will apply.

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AUSTRALIAN STANDARD

Sampling procedures for inspection by attributes — Part 2: Sampling plans indexed by limiting quality (LQ) for isolated lot inspection

0 Introduction

0.1 General

ISO 2859 comprises four parts:

Part 0: General introduction.

Part 1: Sampling plans indexed by acceptable quality level (AQL) for lot-by-lot inspection.

Part 2: Sampling plans indexed by limiting quality (LQ) for isolated lot inspection.

Part 3: Skip lot sampling plan.

ISO 2859/1 sampling plans, indexed in terms of AQL, which is defined as a process average, were primarily designed for the

Consequently, in certain of the above cases consumer protection may need to be attained or measured by other methods. This part of ISO 2859 uses the limiting quality to measure consumer protection. It should be remembered, however, that prior information on the supplier's quality assurance system and its effectiveness may play a major part in deciding whether or not to accept a single lot.

0.2 Objectives

In an attempt to reconcile the somewhat diverse requests for assistance made over the past few years by committees of international standardizing bodies representing various product sectors, this part of ISO 2859 was drawn up in accordance with the following principles:

1 Scope and field of application

1.1 Scope

This part of ISO 2859 establishes LQ sampling plans and procedures for inspection by attributes compatible with ISO 2859/1 that can be used when the switching rules given in ISO 2859/1 are not applied, for example, when lots are of an isolated nature.

The plans in this part of ISO 2859 are indexed by a preferred series of limiting qualities (LQ) with a consumer's risk usually below 10 %, but always below 13 %. This method of indexing permits the "ad-hoc" procedure¹⁾ mentioned in sub-clause 12.6 of ISO 2859/1 to be implemented as a standard procedure.

NOTE — The plans in ISO 2859/1 are indexed by a preferred series of AQL values and inspection levels. During the inspection of a continuing series of lots the application of switching rules helps to ensure that the process average in that series of lots is kept below the specified AQL. Limiting quality does not have the same direct relationship with the process average (see 3.5.1).

1.2 Field of application

Alternative procedures are provided in this part of ISO 2859 to cater for two situations often met in practice:

- a) **Procedure A**, to be used when the supplier and consumer both wish to regard the lot in isolation. The tables are based on random sampling from finite lots for both consumer and producer risks. This procedure shall be used

3.2 Choice of sampling procedure

Although procedure A is based on the hypergeometric distribution for sampling results, this distribution is well approximated by the binomial distribution for plans with non-zero acceptance numbers in procedure A. Hence the OC curves for these plans are well approximated by the tabulated performance of the same plans in procedure B. However, procedure A uses plans with acceptance number zero and with sample sizes based on the hypergeometric distribution of sampling results while procedure B excludes accept zero plans, replacing them with 100 % inspection.

The choice between the procedures is dominated by the attitude towards accept zero plans. Procedure A uses accept zero plans linking the sample size and the lot size by the hypergeometric distribution until the proposed plan corresponds to the accept zero plan in ISO 2859/1 corresponding to that limiting quality. Thereafter the progression of sampling size and acceptance number with lot size is based on the inspection levels available in ISO 2859/1. The overall effect of procedure A resembles inspection level II for limiting quality less than 8 % and level I for limiting quality greater than 8 % with 8 % being intermediate between these levels.

Procedure B provides greater flexibility in the choice of inspection levels. The tabulated OC curves are based on the prob-

Although the primary index to these tables is the limiting quality (LQ), the producer/supplier needs guidance on the quality level required if lots are to have a high probability of acceptance. Information on the producer's risk point is contained in table D1. Information on the probability of acceptance of relatively good lots by accept zero plans is given in table D2.

3.4 Procedure B (use tables B)

A plan is identified by the lot size, limiting quality (LQ) and the inspection level (unless otherwise specified, level II shall be used).

The specified limiting quality is used to select the appropriate table from tables B1 to B10. Within each table the specified lot size and inspection level indicate the appropriate sample size (n) and acceptance number (Ac). Although the primary index to the table is the limiting quality (LQ), the producer/supplier needs guidance on the quality level required if lots are to have a high probability of acceptance. Each table gives information on the equivalent AQL and details of the OC curves. The OC curves are indexed by the sample size code letter used in ISO 2859/1 and the acceptance number.

The OC curves given under tables B1 to B10 are based on the Poisson/binomial distribution; the actual operating characteristic will be more discriminating than these curves by accepting with greater probability when the indicated probability is $\geq 0,90$ and with a smaller probability when the indicated probability is $< 0,10$.

3.5 Choice of parameters for the sampling procedures

Example:

The limiting quality has previously been set at 3,5 %. This is not a preferred value and the tables shall be entered by using the nominal limiting quality $LQ = 3,15 \%$, since 3,5 % lies in the range $2,5 \% < LQ < 4,0 \%$.

3.5.2 Inspection level

In the ISO 2859/1 procedures, increased sample size corresponds to a greater protection for the consumer. In this part of ISO 2859, consumer protection is held approximately constant and the effect of increasing sample size is to permit the supplier greater latitude in the permitted process averages. If the consumer is satisfied by the protection provided against an occasional poor lot by the nominal limiting quality, then the inspection level is primarily of interest to the supplier, especially if the costs of the sampling inspection are borne by him. A process average well below the limiting quality (better quality) would allow the use of smaller sample sizes. Conversely, if the consumer is concerned with actual rather than limiting quality, or if he pays for the sampling costs, then greater inspection levels are not necessarily advantageous. For this reason, inspection level III provided by ISO 2859/1 has not been incorporated in this part of ISO 2859 for limiting qualities greater than 5 %. When sample sizes have to be kept small and other considerations are secondary, specifying level S-2 has the effect of providing a fixed sample size for all lot sizes, the sample size depending only on the limiting quality.

4 Rules for acceptance and non-acceptance

4.1 Sampling

Once the sampling plan has been determined as in clause 3, the

If the Responsible Authority agrees to the resubmission of an unacceptable lot, he shall determine the method of acceptance inspection to be applied (i.e. LQ and/or inspection level) and whether re-inspection shall include all types or classes of non-conformities or only those that caused the initial rejection.

5 Double and multiple sampling plans

Tables D3 and D4 provide the sample sizes and acceptance patterns for the double and multiple sampling plans in ISO 2859/1 equivalent to the single sampling plans given in tables B1 to B10. The sample size code agrees with that in ISO 2859/1 and the acceptance pattern code is the acceptance number in the corresponding single size plans. Since procedure A and procedure B plans have similar OC curves for non-zero acceptance numbers, these double and multiple plans can also be used in procedure A to replace the corresponding single sampling plan. The user is referred to 11.1.2 and 11.1.3 in ISO 2859/1 for the operation of these double and multiple sampling plans.

6 Examples illustrating how to use this part of ISO 2859

6.1 A consumer wishes to purchase prepacked sets of 10 screws to include in the self-assembly bookcase kits he plans to sell. While he prefers each set to contain exactly 10 screws, he can tolerate 1 % of packs with fewer screws but he does not want to risk accepting a much higher percentage of deficient packs. He plans to produce 5 000 kits in lots of 1 250.

The supplier agrees to use procedure A with nominal limiting quality 3,15 %. For lots of size 1 250, the selected plan has $n = 125$, $Ac = 1$.

The supplier offers to provide the packs needed for all 5 000 kits as a single lot. The new sampling plan has $n = 200$, $Ac = 3$.

The single lot requires proportionately fewer tested items and yet the sampling plan still provides a high probability of rejection for quality as poor as 3,15 %, while increasing the probability of acceptance for a lot of quality 1 % from 0,64 to 0,86.

6.2 The same consumer wishes to purchase the wooden components of his self-assembly bookcase kit as standard-size, plastic-faced chipboard panels. The supplier produces these panels as part of his regular production and regards the 7 500 panels needed for each lot of 1 250 kits as single lots in the general stream of supply to DIY shops. Scars to the plastic facing occur with probability 0,025 according to quality control checks. The consumer can tolerate some scarred panels since these can be detected and set aside during the processing to

produce the bookcase kit, but he decides that if 5 % of the panels were scarred this would present problems during the processing.

The consumer and supplier agree that procedure B is appropriate and select nominal limiting quality 5,0 % with inspection level S-4. The parameters of the sampling plan for a lot size of 7 500 is $n = 80$, $Ac = 1$. With this plan the probability of acceptance with the current process average is less than 0,5. A lot which is unacceptable has to be 100 % inspected before use and this high probability of non-acceptance implies inspection costs larger than desirable.

Inspection level III would have provided a sampling plan with $n = 315$ and $Ac = 10$. The current process average would produce lots with a probability of acceptance greater than 0,80. A supplier with a better process average, say 1 %, would obtain a similar probability of acceptance with inspection level S-4. This illustrates the ability of better suppliers to work with smaller sample sizes whilst still meeting the same limiting quality criterion.

7 Compatibility with ISO 2859/1

7.1 General

Within the probability constraints inherent in attribute sampling, the LQ indexed plans standardized in table A and tables B provide a rationalized selection from the existing AQL indexed plans of ISO 2859/1. Similar rules for acceptance and non-acceptance and the ISO 2859/1 lot size categories have also been retained for compatibility. Significant deviations are given in 7.2 and 7.3.

7.2 Procedure A (see table A)

For unique lots with a relatively high sample size/lot size ratio, it becomes necessary to use the hypergeometric distribution. Consequently, there are an additional 39 ($Ac = 0$) plans in table A for which operating characteristic (OC) curve data is given in table D2. The remaining 80 plans of table A have been taken from ISO 2859/1.

7.3 Procedure B (see tables B)

All the plans in tables B have been selected from ISO 2859/1 by using a sliding scale for the consumer's risk (usually below 10 %) at the specified limiting quality (LQ). ISO 2859/1 inspection levels are also included (see 3.5.2) but $Ac = 0$ plans have not been included in tables B, as table A can be used, if $Ac = 0$ plans are considered essential.

Table A — Single sampling plans indexed by limiting quality (LQ) (Procedure A)

Lot size		Limiting quality in percent (LQ)									
		0,5	0,8	1,25	2,0	3,15	5,0	8,0	12,5	20	32
16 to 25	n Ac	→	→	→	→	→	25 ¹⁾ 0	17 ¹⁾ 0	13 0	9 0	6 0
26 to 50	n Ac	→	→	→	50 ¹⁾ 0	50 ¹⁾ 0	28 ¹⁾ 0	22 0	15 0	10 0	6 0
51 to 90	n Ac	→	→	90 ¹⁾ 0	50 0	44 0	34 0	24 0	16 0	10 0	8 0
91 to 150	n Ac	→	150 ¹⁾ 0	90 0	80 0	55 0	38 0	26 0	18 0	13 0	13 1
151 to 280	n Ac	200 ¹⁾ 0	170 ¹⁾ 0	130 0	95 0	65 0	42 0	28 0	20 0	20 1	13 1
281 to 500	n Ac	280 0	220 0	155 0	105 0	80 0	50 0	32 0	32 1	20 1	20 3
501 to 1 200	n Ac	380 0	255 0	170 0	125 0	125 1	80 1	50 1	32 1	32 3	32 5
1 201 to 3 200	n Ac	430 0	280 0	200 0	200 1	125 1	125 3	90 3	50 3	50 5	50 10
3 201 to 10 000	n Ac	460 0	315 0	315 1	200 1	200 3	200 5	125 5	80 5	80 10	80 18
10 001 to 35 000	n Ac	500 0	500 1	315 1	315 3	315 5	315 10	200 10	125 10	125 18	80 18
35 001 to 150 000	n Ac	800 1	500 1	500 3	500 5	500 10	500 18	315 18	200 18	125 18	80 18
150 001 to 500 000	n Ac	800 1	800 3	800 5	800 10	800 18	500 18	315 18	200 18	125 18	80 18
> 500 000	n Ac	1 250 3	1 250 5	1 250 10	1 250 18	800 18	500 18	315 18	200 18	125 18	80 18

1) When n exceeds the lot size, use 100 % inspection with zero acceptance number.

→ Limiting quality implies less than one nonconforming item in the lot. Use first available plan for higher LQ.

Table B1 – Sampling plans for limiting quality 0.5 %

Lot sizes for inspection levels					ISO 2859/1 Single sampling plan (Normal inspection)			Code letter	Tabulated values of submitted quality accepted with designated probabilities ¹⁾ (quality as percent nonconforming)					Acceptance probabilities for limiting quality ²⁾	
S-1 to S-3	S-4	I	II	III	AQL	n	Ac		0,95	0,90	0,50	0,10	0,05	max.	min.
> 800 ³⁾	> 800 ³⁾	> 800 ³⁾	801 ³⁾ to 500 000	801 ³⁾ to 150 000	0,065	800	1	P	0,044 4	0,066 5	0,210	0,486	0,593	0,091	0,000
			> 500 000	150 001 to 500 000	0,10	1 250	3	Q	0,109	0,140	0,294	0,534	0,620	0,129	0,129
				> 500 000	0,10	2 000	5	R	0,131	0,158	0,284	0,464	0,526	0,066	0,066

- 1) Probability calculated by the Poisson approximation.
- 2) The exact acceptance probabilities calculated from the hypergeometric distribution vary with lot size, the maximum and minimum values attained for permitted lot sizes are given for each plan.
- 3) For fewer than 801 in the lot, 100 % inspect the lot.

Operating characteristic curves for single sampling plans

(Curves are identified by sample size code)

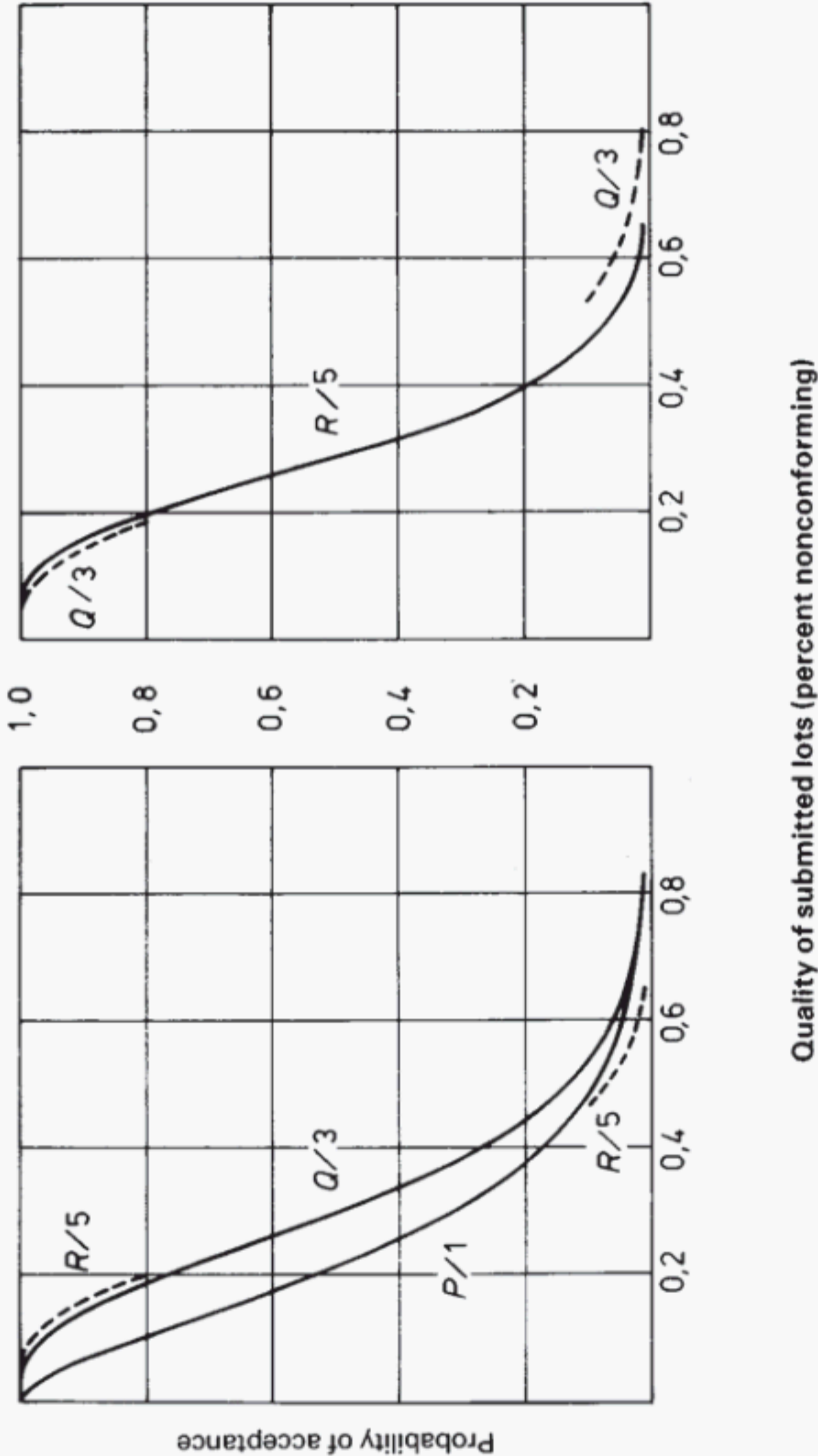


Table B2 – Single sampling plans for limiting quality 0,8 %

Lot sizes for inspection levels				ISO 2859/1 Single sampling plan (Normal inspection)			Code letter	Tabulated values of submitted quality accepted with designated probabilities ¹⁾ (quality as percent nonconforming)					Acceptance probabilities for limiting quality ²⁾	
S-1 to S-3	S-4	I	II	III	AQL	n		0,95	0,90	0,50	0,10	0,05	max.	min.
> 500 ³⁾	> 500 ³⁾	501 ³⁾ to 500 000	501 ³⁾ to 150 000	501 ³⁾ to 35 000	0,1	500	N	0,071	0,106	0,336	0,778	0,949	0,091	0,000
		> 500 000	150 001 to 500 000	35 001 to 150 000	0,15	800	P	0,171	0,218	0,459	0,835	0,969	0,118	0,115
			> 500 000	> 150 000	0,15	1 250	Q	0,209	0,252	0,454	0,742	0,841	0,066	0,066

- 1) Probability calculated by the Poisson approximation.
- 2) The exact acceptance probabilities calculated from the hypergeometric distribution vary with lot size, the maximum and minimum values attained for permitted lot sizes are given for each plan.
- 3) For fewer than 501 in the lot, 100 % inspect the lot.

Operating characteristic curves for single sampling plans

(Curves are identified by sample size code)

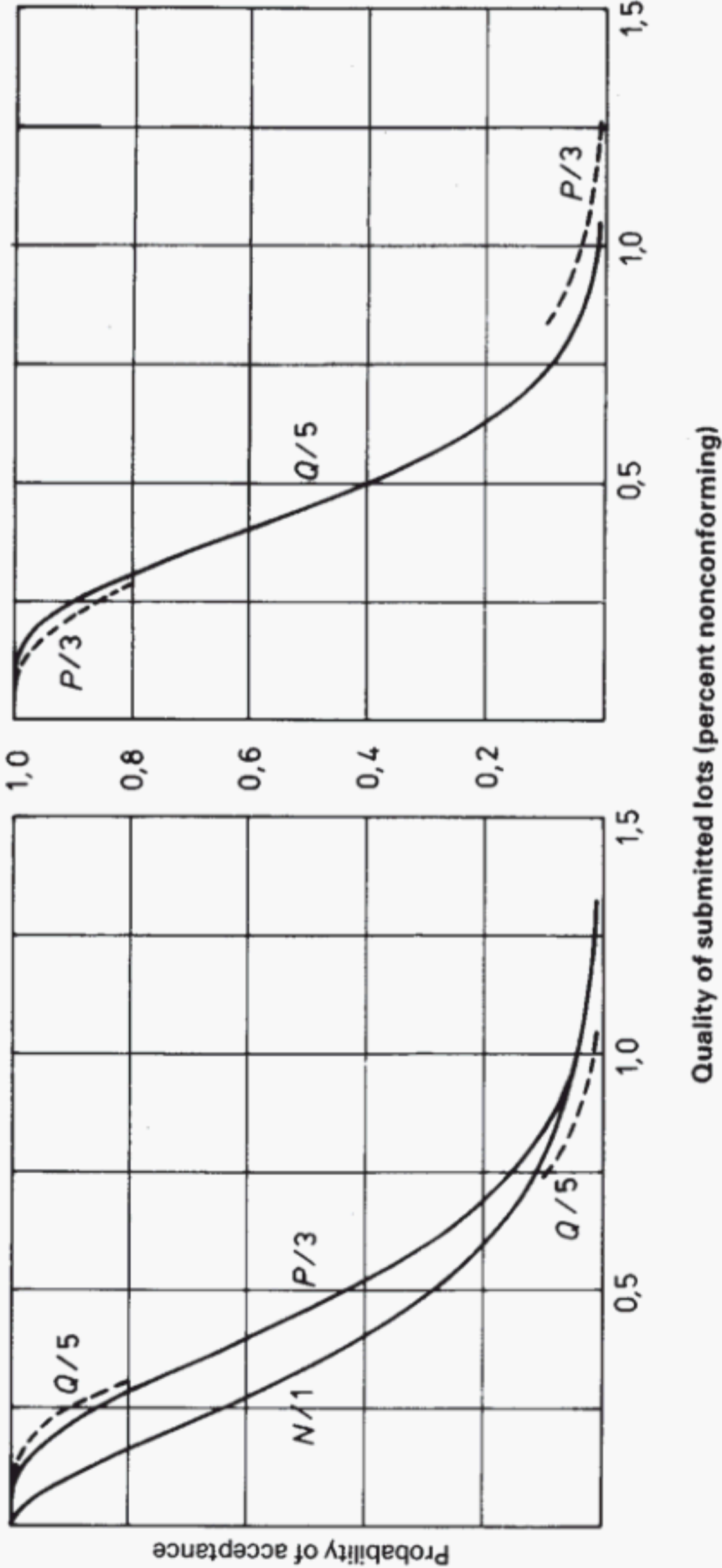


Table B3 – Single sampling plans for limiting quality 1,25 %

Lot sizes for inspection levels				ISO 2859/1 Single sampling plan (Normal inspection)			Code letter	Tabulated values of submitted quality accepted with designated probabilities ¹⁾ (quality as percent nonconforming)						Acceptance probabilities for limiting quality ²⁾	
S-1 to S-3	S-4	I	II	III	AQL	n		0,95	0,90	0,50	0,10	0,05	max.	min.	
> 315 ³⁾	> 315 ³⁾	316 ³⁾ to 500 000	316 ³⁾ to 35 000	316 ³⁾ to 10 000		315	M	0,112	0,168	0,532	1,23	1,51	0,095	0,000	
		> 500 000	35 001 to 150 000	10 001 to 35 000	0,15		N	0,273	0,349	0,734	1,34	1,55	0,129	0,122	
			150 001 to 500 000	35 001 to 150 000	0,25	500	P	0,327	0,394	0,709	1,16	1,31	0,066	0,064	
			> 500 000	> 150 000	0,40	1 250	Q	0,494	0,562	0,853	1,23	1,36	0,089	0,089	

1) Probability calculated by the Poisson approximation.

2) The exact acceptance probabilities calculated from the hypergeometric distribution vary with lot size, the maximum and minimum values attained for permitted lot sizes are given for each plan.

3) For fewer than 316 in the lot, 100 % inspect the lot.

Operating characteristic curves for single sampling plans

(Curves are identified by sample size code)

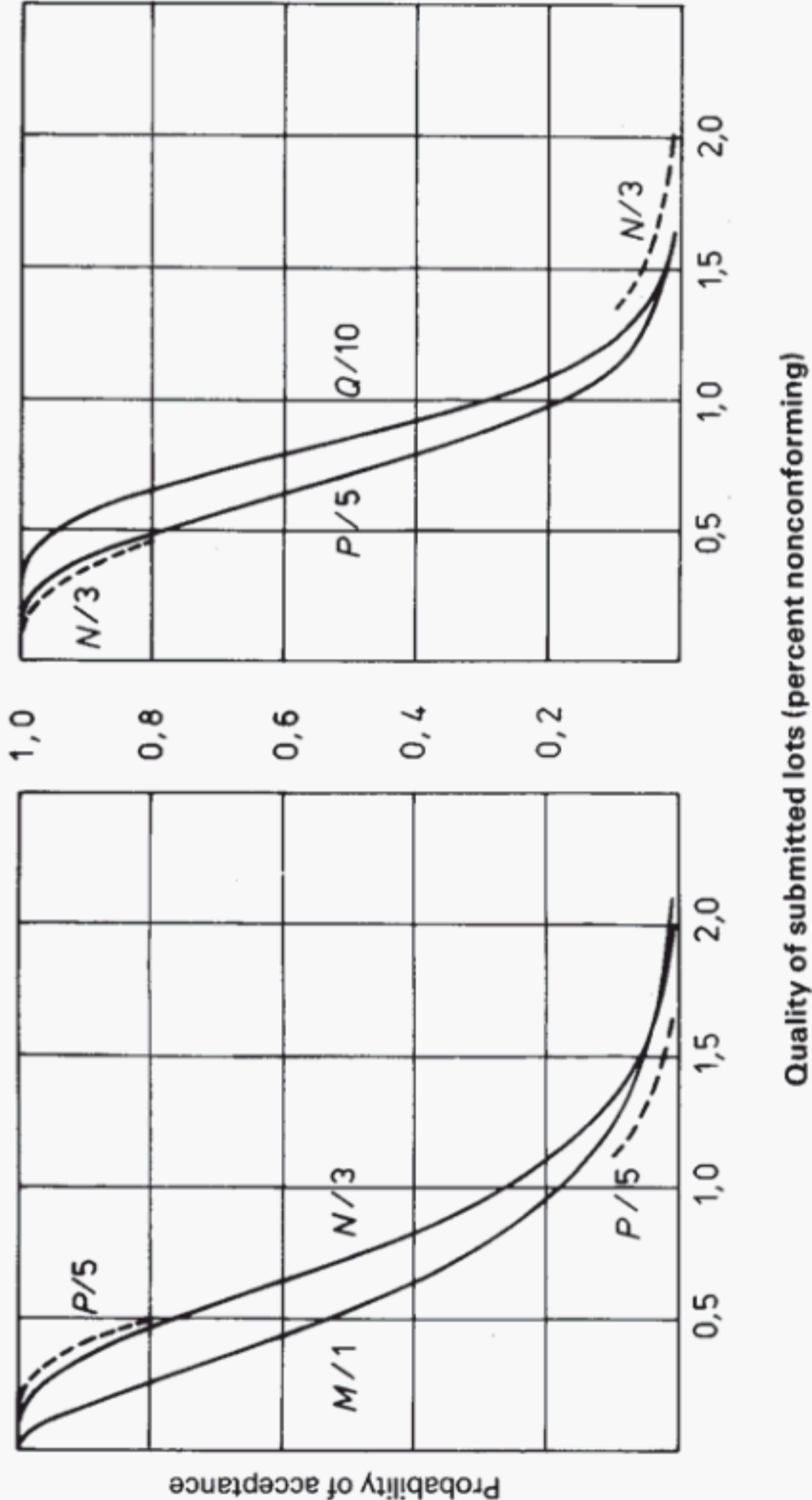


Table B4 – Single sampling plans for limiting quality 2,00 %

Lot sizes for inspection levels				ISO 2859/1 Single sampling plan (Normal inspection)			Code letter	Tabulated values of submitted quality accepted with designated probabilities ¹⁾ (quality as percent nonconforming)					Acceptance probabilities for limiting quality ²⁾	
S-1 to S-3	S-4	I	II	III	AQL	n		0,95	0,90	0,50	0,10	0,05	max.	min.
> 200 ³⁾	> 200 ³⁾	201 ³⁾ to 150 000	201 ³⁾ to 10 000	201 ³⁾ to 3 200		200	L	0,178	0,266	0,839	1,95	2,37	0,089	0,000
		150 001 to 500 000	10 001 to 35 000	3 201 to 10 000	0,25	315	M	0,433	0,533	1,17	2,12	2,46	0,124	0,111
		> 500 000	35 001 to 150 000	10 001 to 35 000	0,40	500	N	0,523	0,630	1,13	1,86	2,10	0,065	0,061
			> 150 000	> 35 000	0,65	800	P	0,771	0,878	1,33	1,93	2,12	0,075	0,073

1) Probability calculated by the Poisson approximation.

2) The exact acceptance probabilities calculated from the hypergeometric distribution vary with lot size, the maximum and minimum values attained for permitted lot sizes are given for each plan.

3) For fewer than 201 in the lot, 100 % inspect the lot.

Operating characteristic curves for single sampling plans

(Curves are identified by sample size code)

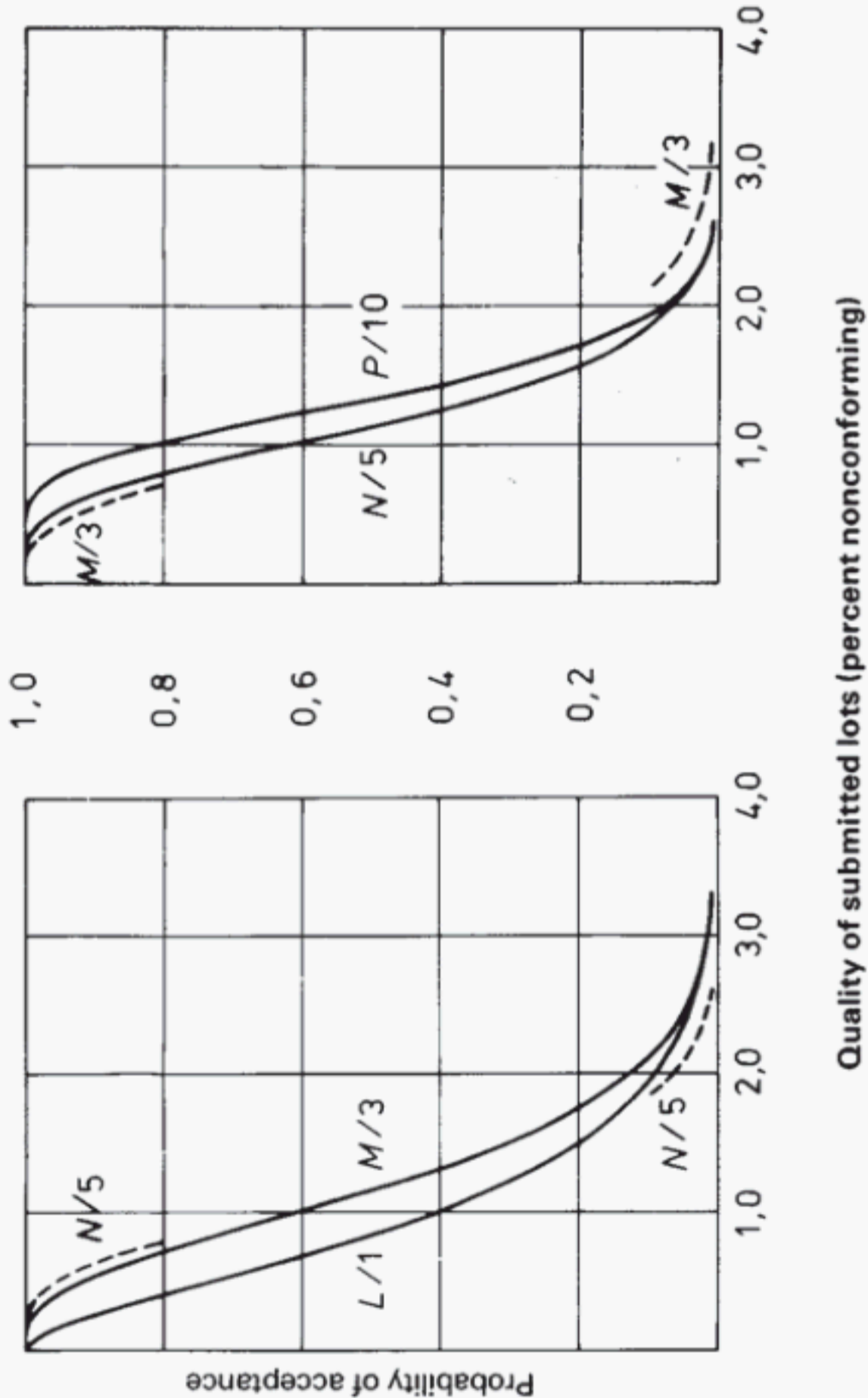


Table B5 – Single sampling plans for limiting quality 3,15 %

Lot sizes for inspection levels				ISO 2859/1 Single sampling plan (Normal inspection)			Code letter	Tabulated values of submitted quality accepted with designated probabilities ¹⁾ (quality as percent nonconforming)					Acceptance probabilities for limiting quality ²⁾	
S-1 to S-3	S-4	I	II	III	AQL	n		0,95	0,90	0,50	0,10	0,05	max.	min.
> 125 ³⁾	> 125 ³⁾	126 ³⁾ to 35 000	126 ³⁾ to 3 200	126 ³⁾ to 1 200		125	K	0,284	0,426	1,34	3,11	3,80	0,093	0,000
		35 001 to 150 000	3 201 to 10 000	1 201 to 3 200		200	L	0,683	0,873	1,84	3,34	3,88	0,122	0,101
		> 150 000	10 001 to 35 000	3 201 to 10 000		315	M	0,829	1,00	1,80	2,94	3,34	0,067	0,058
			> 35 000	> 10 000		500	N	1,231	1,40	2,13	3,08	3,39	0,083	0,078

- 1) Probability calculated by the Poisson approximation.
- 2) The exact acceptance probabilities calculated from the hypergeometric distribution vary with lot size, the maximum and minimum values attained for permitted lot sizes are given for each plan.
- 3) For fewer than 126 in the lot, 100 % inspect the lot.

Operating characteristic curves for single sampling plans

(Curves are identified by sample size code)

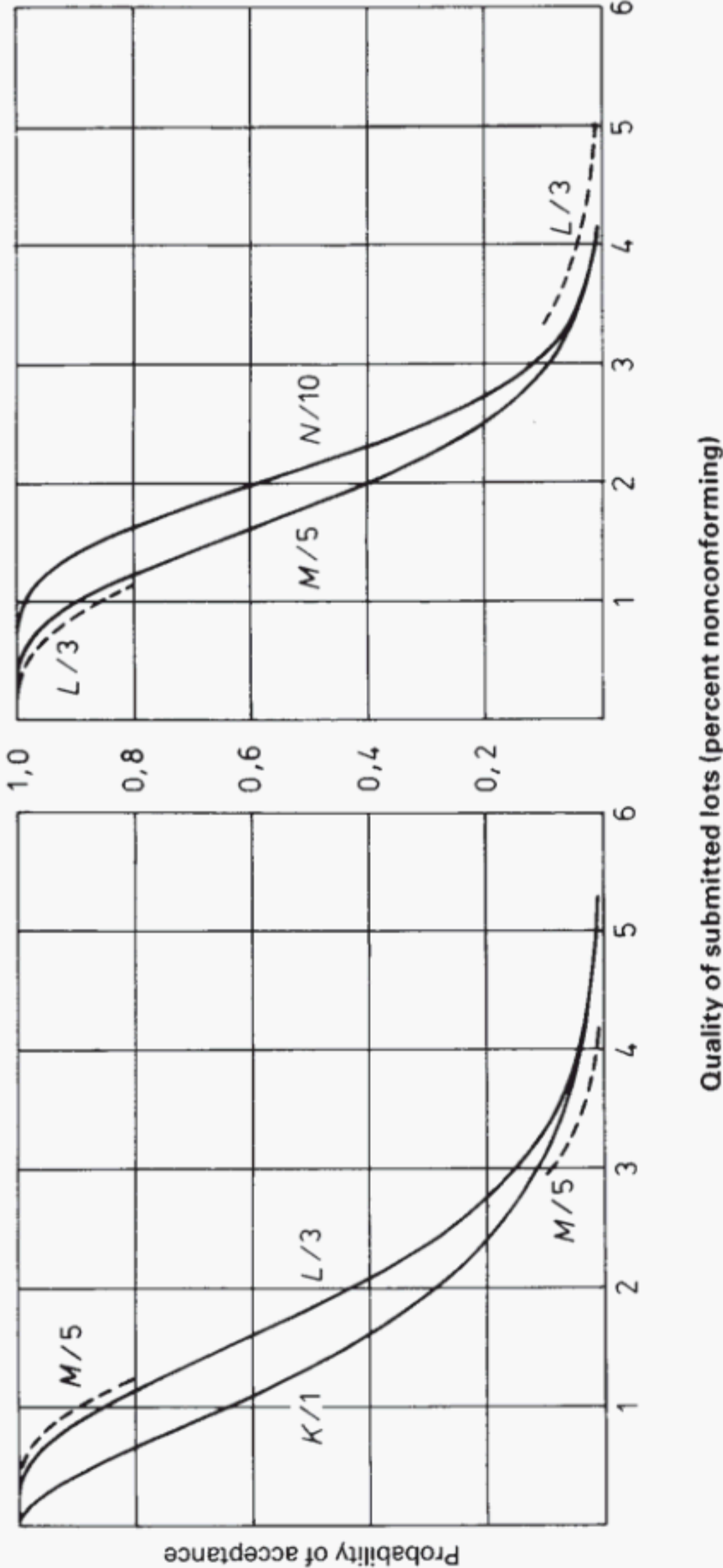


Table B6 — Single sampling plans for limiting quality 5,0 %

Lot sizes for inspection levels				ISO 2859/1 Single sampling plan (Normal inspection)			Code letter	Tabulated values of submitted quality accepted with designated probabilities ¹⁾ (quality as percent nonconforming)					Acceptance probabilities for limiting quality ²⁾	
S-1 to S-3	S-4	I	II	III	AQL	n		0,95	0,90	0,50	0,10	0,05	max.	min.
> 80 ³⁾	81 ³⁾ to 500 000	81 ³⁾ to 10 000	81 ³⁾ to 1 200	81 ³⁾ to 500	0,65	80	J	0,444	0,666	2,09	4,78	5,80	0,086	0,000
	> 500 000	10 001 to 35 000	1 201 to 3 200	501 to 1 200	1,0	125	K	1,09	1,40	2,94	5,35	6,20	0,124	0,092
		35 001 to 150 000	3 201 to 10 000	1 201 to 3 200	1,0	200	L	1,31	1,58	2,84	4,64	5,26	0,062	0,048
		> 150 000	> 10 000	> 3 200	1,5	315	M	1,96	2,23	3,39	4,89	5,38	0,081	0,072

- 1) Probability calculated by the Poisson approximation for code letters K, L and M. Binomial distribution for code letter J.
- 2) The exact acceptance probabilities calculated from the hypergeometric distribution vary with lot size, the maximum and minimum values attained for permitted lot sizes are given for each plan.
- 3) For fewer than 81 in the lot, 100 % inspect the lot.

Operating characteristic curves for single sampling plans

(Curves are identified by sample size code)

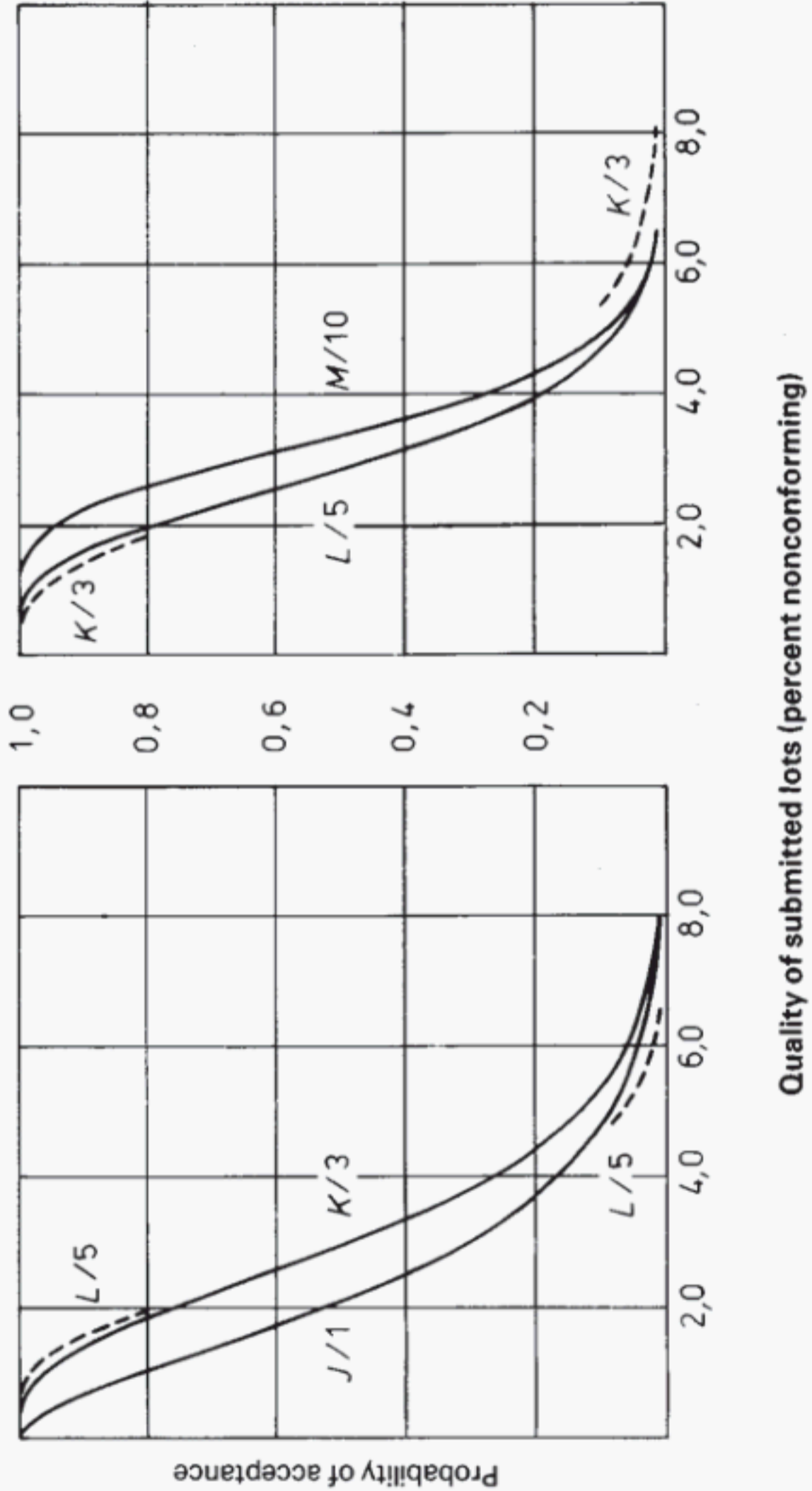


Table B7 — Single sampling plans for limiting quality 8.0 %

Lot sizes for inspection levels				ISO 2859/1 Single sampling plan (Normal inspection)			Code letter	Tabulated values of submitted quality accepted with designated probabilities ¹⁾ (quality as percent nonconforming)					Acceptance probabilities for limiting quality ²⁾	
S-1 to S-3	S-4	I	II	III	AQL	n		0,95	0,90	0,50	0,10	0,05	max.	min.
> 50 ³⁾	> 50 ³⁾	51 ³⁾ to 35 000	51 ³⁾ to 3 200	51 ³⁾ to 500	1,0	50	H	0,712	1,07	3,33	7,56	9,13	0,083	0,000
		35 001 to 500 000	3 201 to 10 000	501 to 1 200	1,5	80	J	1,73	2,20	4,57	8,16	9,39	0,109	0,090
		> 500 000	10 001 to 35 000	1 201 to 3 200	1,5	125	K	2,09	2,52	4,54	7,42	8,41	0,059	0,051
			> 35 000	> 3 200	2,5	200	L	3,09	3,51	5,33	7,70	8,48	0,069	0,064

- 1) Probability calculated by the Poisson approximation for code letters K and L. Binomial distribution for code letters H and J.
- 2) The exact acceptance probabilities calculated from the hypergeometric distribution vary with lot size, the maximum and minimum values attained for permitted lot sizes are given for each plan.
- 3) For fewer than 51 in the lot, 100 % inspect the lot.

Operating characteristic curves for single sampling plans

(Curves are identified by sample size code)

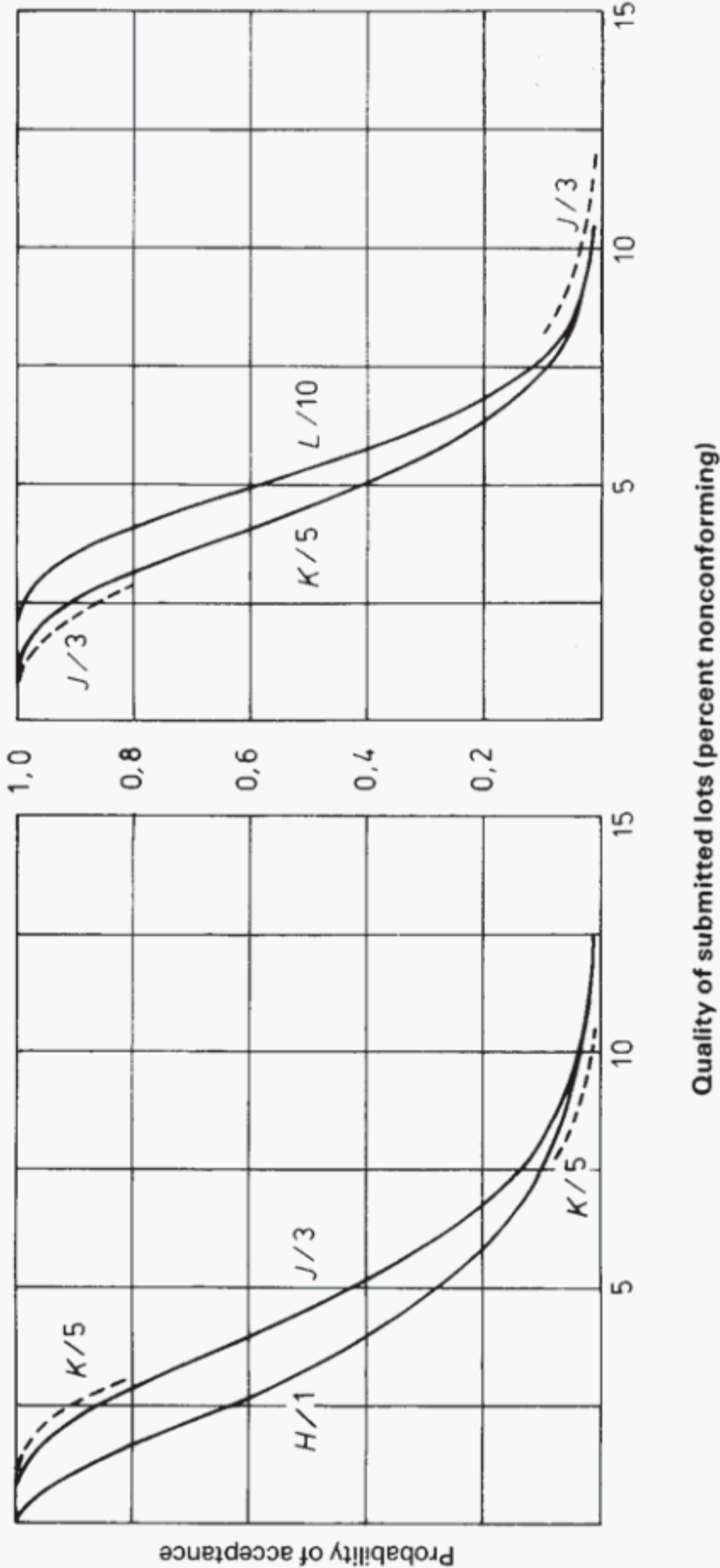


Table B8 — Single sampling plans for limiting quality 12,5 %

Lot sizes for inspection levels				ISO 2859/1 single sampling plan (contrôle normal)			Code letter	Tabulated values of submitted quality accepted with designated probabilities ¹⁾ (quality as percent nonconforming)					Acceptance probabilities for limiting quality ²⁾	
S-1 to S-3	S-4	I	II	III	AQL	n	Ac	0,95	0,90	0,50	0,10	0,05	max.	min.
> 32 ³⁾	33 ³⁾ to 500 000	33 ³⁾ to 10 000	33 ³⁾ to 1 200	33 ³⁾ to 280	1,5	32	1		1,13	1,67	11,6	14,0	0,078	0,000
	> 500 000	10 001 to 35 000	1 201 to 3 200	281 to 500	2,5	50	3		2,77	3,54	12,9	14,8	0,114	0,094
		35 001 to 500 000	3 201 to 10 000	501 to 1 200	2,5	80	5		3,32	3,98	11,3	12,7	0,055	0,043
		> 500 000	> 10 000	> 1 200	4,0	125	10		4,94	5,62	12,3	13,6	0,077	0,070

- 1) Probability calculated by the Poisson approximation for code letter K. Binomial distribution for code letters G, H and J.
- 2) The exact acceptance probabilities calculated from the hypergeometric distribution vary with lot size, the maximum and minimum values attained for permitted lot sizes are given for each plan.
- 3) For fewer than 33 in the lot, 100 % inspect the lot.

Operating characteristic curves for single sampling plans

(Curves are identified by sample size code)

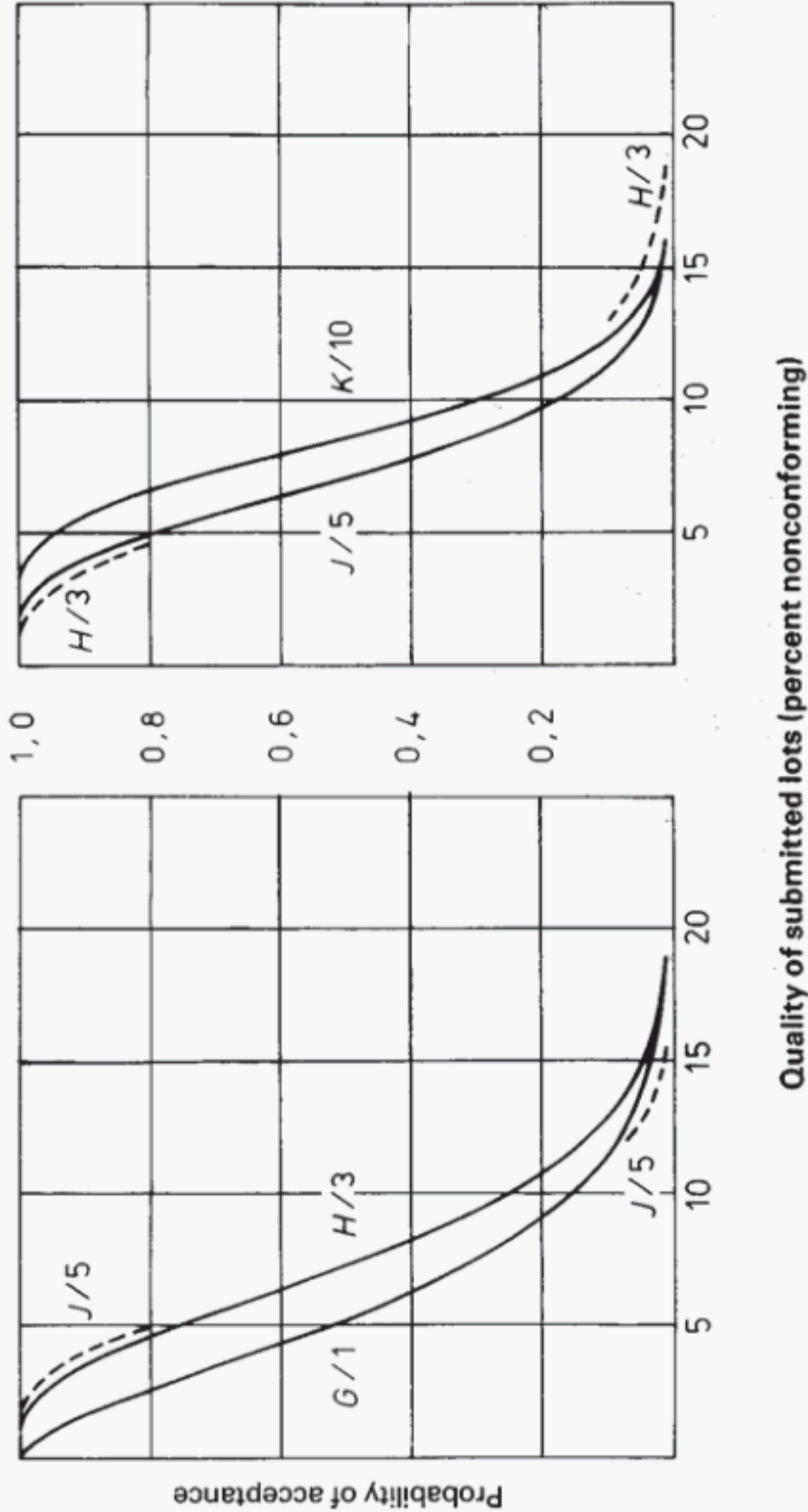


Table B9 — Single sampling plans for limiting quality 20,0 %

Lot sizes for inspection levels				ISO 2859/1 Single sampling plan (Normal inspection)				Code letter	Tabulated values of submitted quality accepted with designated probabilities ¹⁾ (quality as percent nonconforming)					Acceptance probabilities for limiting quality ²⁾	
				AQL	n	Ac								max.	min.
S-1 to S-3	S-4	I	II	III					0,95	0,90	0,50	0,10	0,05		
> 20 ³⁾	21 ³⁾ to 35 000	21 ³⁾ to 1 200	21 ³⁾ to 500	21 ³⁾ to 150	20	1	F								
	35 001 to 500 000	1 201 to 10 000	501 to 1 200	151 to 280	32	3	G		1,80	2,69	8,25	18,1	21,6	0,069	0,000
	> 500 000	10 001 to 35 000	1 201 to 3 200	281 to 500	50	5	H		4,39	5,56	11,4	19,7	22,5	0,093	0,072
		> 35 000	> 3 200	> 500	80	10	J		5,34	6,42	11,3	17,8	19,9	0,048	0,037
									7,91	8,95	13,3	18,6	20,3	0,056	0,049

- 1) Probability calculated by the binomial distribution.
- 2) The exact acceptance probabilities calculated from the hypergeometric distribution vary with lot size, the maximum and minimum values attained for permitted lot sizes are given for each plan.
- 3) For fewer than 21 in the lot, 100 % inspect the lot.

Operating characteristic curves for single sampling plans

(Curves are identified by sample size code)

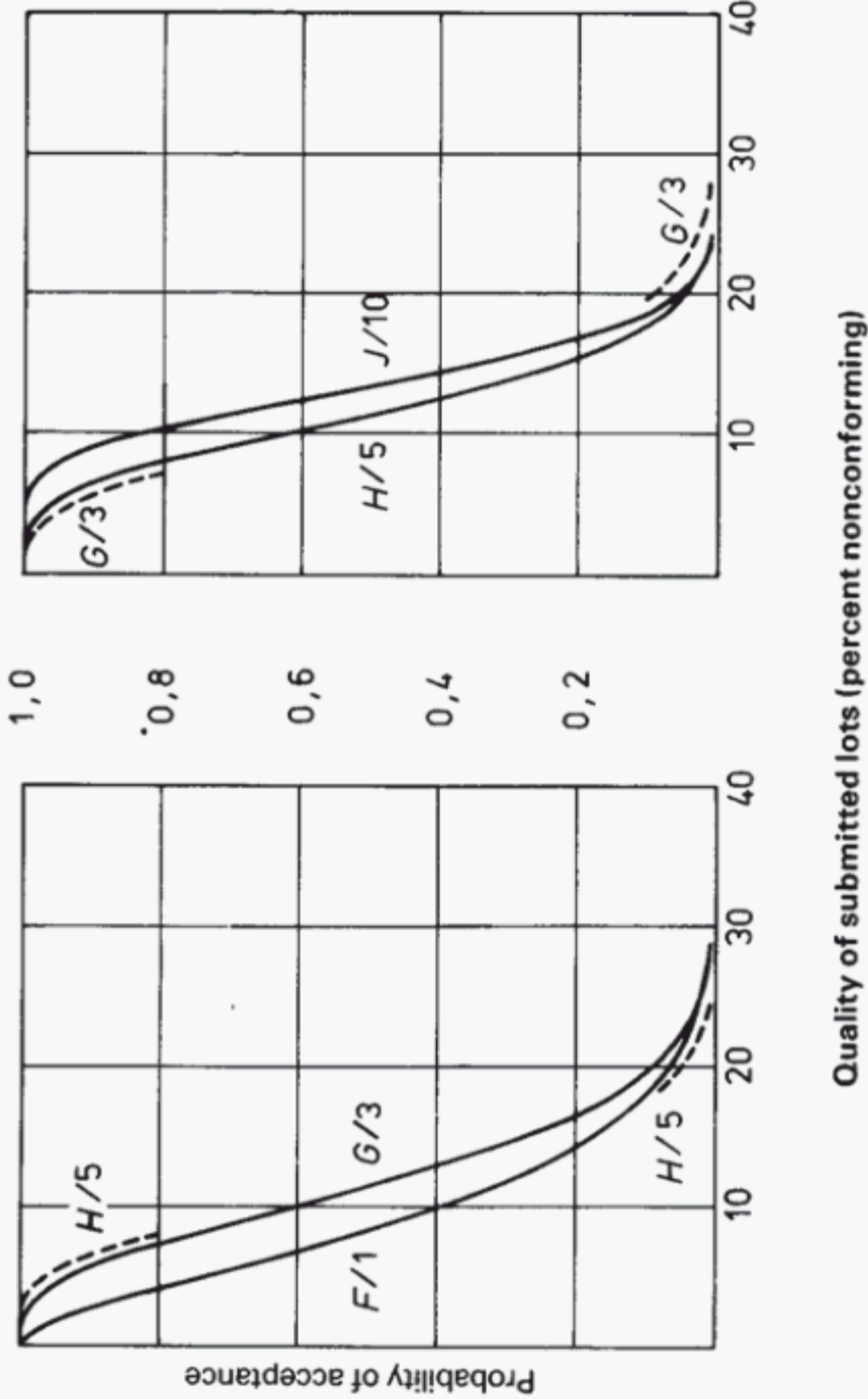


Table B10 — Single sampling plans for limiting quality 32,0 %

Lot sizes for inspection levels					ISO 2859/1 Single sampling plan (Normal inspection)			Code letter	Tabulated values of submitted quality accepted with designated probabilities ¹⁾ (quality as percent nonconforming)						Acceptance probabilities for limiting quality ²⁾	
S-1 to S-3	S-4	I	II	III	AQL	n	Ac		0,95	0,90	0,50	0,10	0,05	max.	min.	
> 13 ³⁾	14 ³⁾ to 3 200	14 ³⁾ to 500	14 ³⁾ to 280	14 ³⁾ to 90		13	1			2,81	4,16	12,6	26,8	31,6	0,047	0,000
	3 201 to 35 000	501 to 1 200	281 to 500	91 to 150		20	3		7,13	9,03	18,1	30,4	34,4	0,077	0,062	
	35 001 to 500 000	1 201 to 10 000	501 to 1 200	151 to 280		32	5		8,5	10,2	17,5	27,1	30,1	0,031	0,022	
	> 500 000	> 10 000	> 1 200	> 280		50	10		12,9	14,5	21,2	29,1	31,6	0,044	0,042	

1) Probability calculated by the binomial distribution.

2) The exact acceptance probabilities calculated from the hypergeometric distribution vary with lot size, the maximum and minimum values attained for permitted lot sizes are given for each plan.

3) For fewer than 14 in the lot, 100 % inspect the lot.

Operating characteristic curves for single sampling plans

(Curves are identified by sample size code)

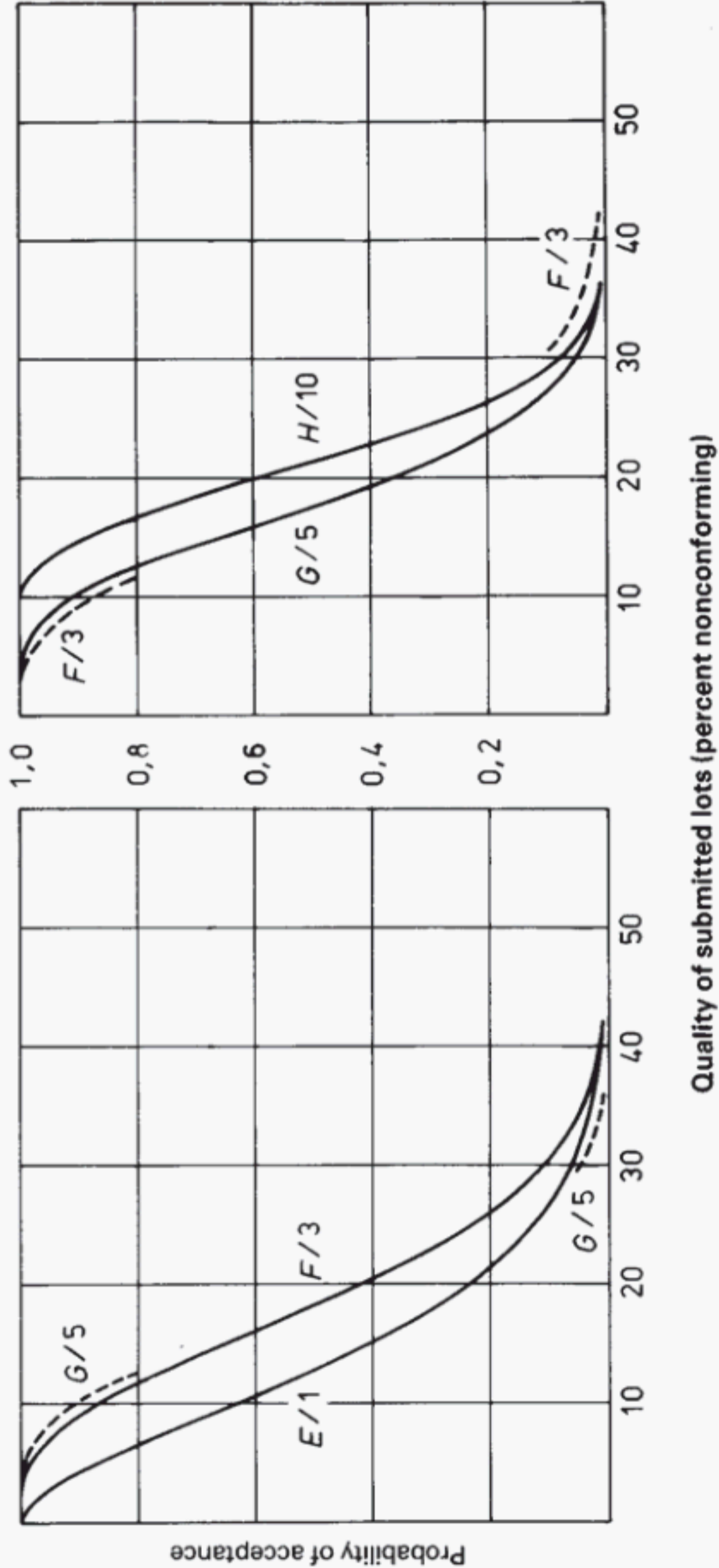


Table C — Relation between limiting quality (LQ) and consumer's risk quality (CRQ)

Preferred value of limiting quality (LQ) %	Corresponding range of CRQ in tables B1 to B10 (at 10 % consumer's risk)	Corresponding range of CRQ in tables B1 to B10 (at 5 % consumers risk)	Corresponding interval ¹⁾ for non-standard value of limiting quality (L)
0,5	0,46 < CRQ < 0,54	0,52 < CRQ < 0,62	0,4 < L < 0,65
0,8	0,74 < CRQ < 0,84	0,84 < CRQ < 0,97	0,65 < L < 1,0
1,25	1,16 < CRQ < 1,34	1,31 < CRQ < 1,55	1,0 < L < 1,6
2,0	1,86 < CRQ < 2,12	2,10 < CRQ < 2,46	1,6 < L < 2,5
3,15	2,94 < CRQ < 3,34	3,34 < CRQ < 3,88	2,5 < L < 4,0
5,0	4,64 < CRQ < 5,35	5,26 < CRQ < 6,20	4,0 < L < 6,5
8,0	7,42 < CRQ < 8,16	8,41 < CRQ < 9,39	6,5 < L < 10,0
12,5	11,3 < CRQ < 12,9	12,7 < CRQ < 14,8	10,0 < L < 15,0
20,0	17,8 < CRQ < 19,7	19,9 < CRQ < 22,5	15,0 < L < 25,5
32,0	26,8 < CRQ < 30,4	30,1 < CRQ < 34,4	25,0 < L < 40,0

1) These plans are intended to be used with the preferred series of limiting qualities. If these plans are introduced where a non-standard limiting quality is already specified, the plans should be entered with the preferred value (LQ) corresponding to the interval containing the non-standard value (L).

Table D1 — Summary of sampling plan properties for procedure A

Sample size/acceptance No. (n/Ac)	Probability of acceptance at the limiting quality ¹⁾ (PLQ)
Percent nonconforming (p)	Probability of acceptance at quality (p)

Each cell in the table shows the consumer's risk (PLQ) and the producer's risk point (p , P_a).

Lot size	Limiting quality in percent (LQ)										
	0,5	0,8	1,25	2,0	3,15	5,0	8,0	12,5	20,0	32,0	
16 to 25						Inspect every item	17/0 0	13/0 0	9/0 0	6/0 0	0,070 1,0
26 to 50						Inspect every item	22/0 0	15/0 0	10/0 0	6/0 0	0,085 1,0
51 to 90						Inspect every item	24/0 0	16/0 0	10/0 0	8/0 1,0	0,040 1,0
91 to 150						Inspect every item	26/0 0	18/0 0	13/0 0	13/1 2,67	0,041 0,96
151 to 280						Inspect every item	28/0 0	20/0 0	20/1 1,79	13/1 2,86	0,044 0,95
281 to 500						Inspect every item	32/0 0	32/1 1,00	20/1 1,80	20/3 7,20	0,072 0,95
501 to 1 200						Inspect every item	50/1 0,667	32/1 1,08	32/3 4,42	32/5 8,50	0,029 0,95
1 201 to 3 200						Inspect every item	80/3 1,75	50/3 2,78	50/5 5,38	50/10 12,9	0,042 0,95
3 201 to 10 000						Inspect every item	125/5 2,12	80/5 3,32	80/10 7,92	80/18 16,1	0,041 0,95
10 001 to 35 000						Inspect every item	200/10 3,99	125/10 5,01	125/18 10,2	80/18 16,1	0,041 0,95
35 001 to 150 000						Inspect every item	315/18 3,99	200/18 6,31	125/18 10,2	80/18 16,1	0,041 0,95
150 001 to 500 000						Inspect every item	315/18 3,99	200/18 6,31	125/18 10,2	80/18 16,1	0,041 0,95
> 500 000						Inspect every item	315/18 3,99	200/18 6,31	125/18 10,2	80/18 16,1	0,041 0,95

1) The stated probability of acceptance is the maximum for lots of limiting quality in the size range and the minimum for lots with percent nonconforming p . These probabilities are based on the hypergeometric distribution. The producer's risk is (p , P_a), the consumer's risk point is (LQ, PLQ).

2) No lot in this size range can be of limiting quality since this implies a fractional number of nonconforming.

Table D2 — Selected hypergeometric data for OC curves for zero acceptance plans

A sample of size n is drawn from a lot containing R nonconforming items. The lot is accepted if there are nonconforming items in the sample ($Ac = 0$), the probability of acceptance for the lot (P_a) is shown below for the minimum and maximum lot sizes in the lot size range and the various sampling plans " $n/0$ " (printed in bold type).

Limiting quality (LQ)									
0,5	0,8	1,25	2,0	3,15	5,0	8,0	12,5	20,0	32,0
300/0 Lot size 501 1 200	255/0 Lot size 501 1 200	170/0 Lot size 501 1 200	125/0 Lot size 501 1 200			17/0 Lot size 16 25	13/0 Lot size 16 25	9/0 Lot size 16 25	6/0 Lot size 16 25
R P_a P_a	R P_a P_a	R P_a P_a	R P_a P_a			R P_a P_a	R P_a P_a	R P_a P_a	R P_a P_a
0 1,00 1,00 1 0,24 0,68 2 0,06 0,47 3 0,01 0,32 4 0,00 0,22 5 0,00 0,15 6 0,00 0,10 8 0,00 0,05	0 1,00 1,00 1 0,49 0,79 2 0,24 0,62 3 0,12 0,49 4 0,06 0,38 5 0,03 0,30 10 0,00 0,09 13 0,00 0,04	0 1,00 1,00 1 0,66 0,86 2 0,44 0,74 3 0,29 0,63 6 0,08 0,40 7 0,05 0,34 15 0,00 0,10 19 0,00 0,05	0 1,00 1,00 1 0,75 0,90 2 0,56 0,80 3 0,42 0,72 8 0,10 0,41 10 0,05 0,33 20 0,00 0,11 27 0,00 0,05			0 1,00 1,00 1 0,32 0,62 2 0,09 0,22 3 0,02 0,10 4 0,01 0,04 5 0,00 0,01 6 0,00 0,01 7 0,00 0,00	0 1,00 1,00 1 0,19 0,48 2 0,03 0,22 3 0,00 0,10 4 0,00 0,04 5 0,00 0,01 6 0,00 0,01 7 0,00 0,00	0 1,00 1,00 1 0,44 0,64 2 0,18 0,40 3 0,06 0,24 4 0,02 0,14 5 0,00 0,08 6 0,00 0,05 7 0,00 0,02	0 1,00 1,00 1 0,63 0,76 2 0,38 0,57 3 0,21 0,42 4 0,12 0,31 5 0,06 0,22 7 0,01 0,10 9 0,00 0,05
430/0 Lot size 1 201 3 200	280/0 Lot size 1 201 3 200	200/0 Lot size 1 201 3 200			28/0 Lot size 26 50	22/0 Lot size 26 50	15/0 Lot size 26 50	10/0 Lot size 26 50	6/0 Lot size 26 50
R P_a P_a	R P_a P_a	R P_a P_a			R P_a P_a	R P_a P_a	R P_a P_a	R P_a P_a	R P_a P_a
0 1,00 1,00 1 0,64 0,87 2 0,41 0,75 3 0,26 0,65 5 0,11 0,49 7 0,04 0,36 16 0,00 0,10 21 0,00 0,06	0 1,00 1,00 1 0,77 0,91 2 0,59 0,83 3 0,45 0,76 9 0,09 0,44 11 0,05 0,36 25 0,00 0,10 33 0,00 0,05	0 1,00 1,00 1 0,83 0,94 2 0,69 0,88 3 0,58 0,82 13 0,09 0,43 16 0,05 0,36 35 0,00 0,10 46 0,00 0,05			0 1,00 1,00 1 0,44 0,70 2 0,19 0,31 3 0,08 0,17 4 0,03 0,09 5 0,01 0,05 6 0,00 0,02 7 0,00 0,00	0 1,00 1,00 1 0,15 0,56 2 0,02 0,31 3 0,00 0,17 4 0,00 0,09 5 0,00 0,05 6 0,00 0,02 7 0,00 0,01	0 1,00 1,00 1 0,42 0,70 2 0,17 0,49 3 0,06 0,33 4 0,02 0,23 5 0,01 0,15 6 0,00 0,10 8 0,00 0,04	0 1,00 1,00 1 0,62 0,80 2 0,37 0,64 3 0,22 0,50 4 0,12 0,40 6 0,03 0,24 9 0,00 0,11 12 0,00 0,05	0 1,00 1,00 1 0,77 0,88 2 0,58 0,77 3 0,44 0,68 7 0,12 0,38 9 0,05 0,28 15 0,00 0,10 19 0,00 0,05
450/0 Lot size 3 201 10 000	315/0 Lot size 3 201 10 000		50/0 Lot size 51 90	44/0 Lot size 51 90	34/0 Lot size 51 90	24/0 Lot size 51 90	16/0 Lot size 51 90	10/0 Lot size 51 90	8/0 Lot size 51 90
R P_a P_a	R P_a P_a		R P_a P_a	R P_a P_a	R P_a P_a	R P_a P_a	R P_a P_a	R P_a P_a	R P_a P_a
0 1,00 1,00 1 0,86 0,96 2 0,74 0,91 3 0,63 0,87 15 0,10 0,50 20 0,05 0,40 50 0,00 0,10 65 0,00 0,05	0 1,00 1,00 1 0,90 0,97 2 0,81 0,94 3 0,73 0,91 22 0,10 0,49 29 0,05 0,39 72 0,00 0,10 93 0,00 0,05		0 1,00 1,00 1 0,02 0,44 2 0,00 0,19 3 0,00 0,08 4 0,00 0,04 5 0,00 0,01 6 0,00 0,01 7 0,00 0,00	0 1,00 1,00 1 0,14 0,51 2 0,02 0,26 3 0,00 0,13 4 0,00 0,06 5 0,00 0,03 6 0,00 0,02 7 0,00 0,01	0 1,00 1,00 1 0,33 0,62 2 0,11 0,38 3 0,03 0,24 4 0,01 0,14 5 0,00 0,09 6 0,00 0,05 7 0,00 0,03	0 1,00 1,00 1 0,53 0,73 2 0,28 0,54 3 0,14 0,39 4 0,07 0,28 5 0,03 0,20 7 0,01 0,10 9 0,00 0,05	0 1,00 1,00 1 0,69 0,82 2 0,47 0,67 3 0,31 0,55 6 0,09 0,30 8 0,04 0,19 11 0,01 0,10 14 0,00 0,05	0 1,00 1,00 1 0,80 0,89 2 0,64 0,79 3 0,51 0,70 10 0,09 0,29 12 0,05 0,22 18 0,01 0,09 22 0,00 0,05	0 1,00 1,00 1 0,84 0,91 2 0,71 0,83 3 0,59 0,75 12 0,10 0,30 15 0,05 0,22 22 0,01 0,10 27 0,00 0,05
500/0 Lot size 10 001 35 000		90/0 Lot size 91 150	80/0 Lot size 91 150	55/0 Lot size 91 150	38/0 Lot size 91 150	26/0 Lot size 91 150	18/0 Lot size 91 150	13/0 Lot size 91 150	
R P_a P_a		R P_a P_a	R P_a P_a	R P_a P_a	R P_a P_a	R P_a P_a	R P_a P_a	R P_a P_a	
0 1,00 1,00 1 0,95 0,99 2 0,90 0,97 3 0,86 0,96 45 0,10 0,52 58 0,05 0,43 160 0,00 0,10 208 0,00 0,05		0 1,00 1,00 1 0,01 0,40 2 0,00 0,16 3 0,00 0,06 4 0,00 0,02 5 0,00 0,01 6 0,00 0,00 7 0,00 0,00	0 1,00 1,00 1 0,12 0,47 2 0,01 0,22 3 0,00 0,10 4 0,00 0,06 5 0,00 0,02 6 0,00 0,01 7 0,00 0,00	0 1,00 1,00 1 0,40 0,63 2 0,15 0,40 3 0,06 0,26 4 0,02 0,16 5 0,01 0,10 6 0,00 0,06 7 0,00 0,04	0 1,00 1,00 1 0,58 0,75 2 0,34 0,56 3 0,19 0,41 4 0,11 0,31 5 0,06 0,23 8 0,01 0,09 10 0,00 0,05	0 1,00 1,00 1 0,71 0,83 2 0,51 0,68 3 0,36 0,56 7 0,09 0,26 8 0,06 0,21 12 0,01 0,09 15 0,00 0,05	0 1,00 1,00 1 0,00 0,00 2 0,64 0,77 3 0,51 0,60 10 0,10 0,27 13 0,04 0,18 17 0,02 0,10 22 0,00 0,05	0 1,00 1,00 1 0,06 0,31 2 0,73 0,83 3 0,03 0,70 14 0,10 0,26 17 0,05 0,20 23 0,02 0,10 30 0,00 0,05	

Table D2 — Selected hypergeometric data for OC curves for zero acceptance plans (*concluded*)

Limiting quality (LQ)																																
0,5			0,8			1,25			2,0			3,15			5,0			8,0			12,5			20,0			32,0					
			170/0			130/0			95/0			65/0			42/0			28/0			20/0											
			Lot size			Lot size			Lot size			Lot size			Lot size			Lot size			Lot size											
			151	280		151	280		151	280		151	280		151	280		151	280		151	280		151	280		151	280				
R	P _a	P _a	R	P _a	P _a	R	P _a	P _a	R	P _a	P _a	R	P _a	P _a	R	P _a	P _a	R	P _a	P _a	R	P _a	P _a	R	P _a	P _a	R	P _a	P _a			
0		1,00	0	1,00	1,00	0	1,00	1,00	0	1,00	1,00	0	1,00	1,00	0	1,00	1,00	0	1,00	1,00	0	1,00	1,00	0	1,00	1,00	0	1,00	1,00			
1		0,39	1	0,14	0,54	1	0,37	0,66	1	0,57	0,77	1	0,72	0,85	1	0,81	0,90	1	0,87	0,93	1	0,87	0,93	1	0,87	0,93	1	0,87	0,93			
2		0,15	2	0,02	0,29	2	0,14	0,44	2	0,32	0,59	2	0,52	0,72	2	0,66	0,81	2	0,75	0,86	2	0,75	0,86	2	0,75	0,86	2	0,75	0,86			
3		0,06	3	0,00	0,15	3	0,05	0,29	3	0,18	0,45	3	0,37	0,61	3	0,54	0,73	3	0,65	0,80	3	0,65	0,80	3	0,65	0,80	3	0,65	0,80			
4		0,02	4	0,00	0,08	4	0,02	0,19	4	0,10	0,35	7	0,10	0,32	11	0,10	0,31	15	0,11	0,32	15	0,11	0,32	15	0,11	0,32	15	0,11	0,32			
5		0,01	5	0,00	0,04	5	0,01	0,12	5	0,06	0,26	9	0,05	0,23	14	0,05	0,22	20	0,05	0,22	20	0,05	0,22	20	0,05	0,22	20	0,05	0,22			
6		0,00	6	0,00	0,02	6	0,00	0,08	9	0,01	0,09	14	0,01	0,10	21	0,01	0,10	29	0,01	0,10	29	0,01	0,10	29	0,01	0,10	29	0,01	0,10			
7		0,00	7	0,00	0,01	7	0,00	0,05	11	0,00	0,05	18	0,00	0,05	27	0,00	0,05	38	0,00	0,05	38	0,00	0,05	38	0,00	0,05	38	0,00	0,05			
280/0			220/0			155/0			105/0			80/0			50/0			32/0														
Lot size			Lot size			Lot size			Lot size			Lot size			Lot size			Lot size														
			281	500		281	500		281	500		281	500		281	500		281	500		281	500		281	500		281	500		281	500	
R	P _a	P _a	R	P _a	P _a	R	P _a	P _a	R	P _a	P _a	R	P _a	P _a	R	P _a	P _a	R	P _a	P _a	R	P _a	P _a	R	P _a	P _a	R	P _a	P _a	R	P _a	P _a
0	1,00	1,00	0	1,00	1,00	0	1,00	1,00	0	1,00	1,00	0	1,00	1,00	0	1,00	1,00	0	1,00	1,00	0	1,00	1,00	0	1,00	1,00	0	1,00	1,00	0	1,00	1,00
1	0,00	0,44	1	0,22	0,56	1	0,45	0,69	1	0,63	0,79	1	0,72	0,84	1	0,82	0,90	1	0,89	0,94	1	0,89	0,94	1	0,89	0,94	1	0,89	0,94	1	0,89	0,94
2	0,00	0,19	2	0,05	0,31	2	0,20	0,49	2	0,29	0,62	2	0,51	0,71	2	0,69	0,91	2	0,79	0,96	2	0,79	0,96	2	0,79	0,96	2	0,79	0,96	2	0,79	0,96
3	0,00	0,08	3	0,01	0,17	3	0,09	0,33	3	0,24	0,49	3	0,36	0,59	3	0,55	0,73	3	0,69	0,82	3	0,69	0,82	3	0,69	0,82	3	0,69	0,82	3	0,69	0,82
4	0,00	0,04	4	0,00	0,10	4	0,04	0,23	6	0,09	0,31	7	0,09	0,29	12	0,09	0,29	10	0,11	0,30	10	0,11	0,30	10	0,11	0,30	10	0,11	0,30	10	0,11	0,30
5	0,00	0,02	5	0,00	0,05	5	0,02	0,15	6	0,06	0,24	9	0,05	0,21	15	0,05	0,20	24	0,05	0,20	24	0,05	0,20	24	0,05	0,20	24	0,05	0,20	24	0,05	0,20
6	0,00	0,01	6	0,00	0,02	6	0,01	0,11	10	0,01	0,09	13	0,01	0,10	21	0,01	0,10	33	0,01	0,10	33	0,01	0,10	33	0,01	0,10	33	0,01	0,10	33	0,01	0,10
7	0,00	0,00	7	0,00	0,02	8	0,00	0,05	13	0,00	0,04	17	0,00	0,05	28	0,00	0,05	43	0,00	0,05	43	0,00	0,05	43	0,00	0,05	43	0,00	0,05	43	0,00	0,05

Table D3 — Equivalent sample sizes for single, double and multiple sampling plans

Type of sampling plan		Sample size code letter and cumulative sample sizes ¹⁾ in accordance with ISO 2859/1											
		E	F	G	H	J	K	L	M	N	P	Q	R
Single		13	20	32	50	80	125	200	315	500	800	1 250	2 000
Double	1st	8	13	20	32	50	80	125	200	315	500	800	1 250
	2nd	16	26	40	64	100	160	250	400	630	1 000	1 600	2 500
Multiple	1st	3	5	8	13	20	32	50	80	125	200	315	500
	2nd	6	10	16	26	40	64	100	160	250	400	630	1 000
	3rd	9	15	24	39	60	96	150	240	375	600	945	1 500
	4th	12	20	32	52	80	128	200	320	500	800	1 260	2 000
	5th	15	25	40	65	100	160	250	400	625	1 000	1 575	2 500
	6th	18	30	48	78	120	192	300	480	750	1 200	1 890	3 000
	7th	21	35	56	91	140	224	350	560	875	1 400	2 205	3 500

1) For double and multiple sampling plans, the tabulated entries are the cumulative sample sizes. In each case the successive stages of sampling take a fresh sample equal in size to that taken in the first stage. This sample is aggregated with the samples from previous stages and the combined sample is then tested by the criterion in table D4.

Table D4 — Equivalent acceptance numbers for single, double and multiple sampling plans

Type of sampling plan	Approximate relative sample sizes at each stage ¹⁾ <i>n</i>	Acceptance number codes									
		1		3		5		10		18 ²⁾	
		Ac	Re	Ac	Re	Ac	Re	Ac	Re	Ac	Re
Single	1	1	2	3	4	5	6	10	11	18	19
Double	0,63	0	2	1	4	2	5	5	9	9	14
	0,63	1	2	4	5	6	7	12	13	23	24
Multiple	0,25	3)	2	3)	3	3)	4	0	5	1	8
	0,25	3)	2	0	3	1	5	3	8	6	12
	0,25	0	2	1	4	2	6	6	10	11	17
	0,25	0	3	2	5	3	7	8	13	16	22
	0,25	1	3	3	6	5	8	11	15	22	25
	0,25	1	3	4	6	7	9	14	17	27	29
	0,25	2	3	6	7	9	10	18	19	32	33
Discrimination ratio (Procedure B) P_{10}/P_{95}		10,9		4,89		3,55		2,50		2)	
Probability of acceptance at AQL (Procedure B)		0,91		0,96		0,98		0,98		2)	

1) These relative samples are approximate only. The exact values are given in table D3 for each sample size code letter.

2) This acceptance number is only used in procedure A.

3) Acceptance of the lot is not permitted on the samples examined.

Table D5 — Correspondence between lot sizes, AQL values in ISO 2859/1 and LQ values
(Inspection levels I and II, procedure B)

Lot size	Use code letter ¹⁾	Sample size	AQL values in ISO 2859/1 for limiting qualities (LQ) ²⁾									
			0,5	0,8	1,25	2,0	3,15	5,0	8,0	12,5	20,0	32,0
2 to 90	I → II →	E	13									
91 to 150	I → II →	E	13									4,0
151 to 280	I → II →	F	20								2,5	6,5
281 to 500	I → II →	G	32							1,5	4,0	6,5
501 to 1 200	I → II →	H	50						1,0	2,5	4,0	10,0
1 201 to 3 200	I → II →	J	80					0,65	1,5	2,5	6,5	
3 201 to 10 000	I → II →	K	125				0,40	1,0	1,5	4,0		
10 001 to 35 000	I → II →	L	200			0,25	0,65	1,0	2,5			
35 001 to 150 000	I → II →	M	315		0,15	0,40	0,65	1,5				
150 001 to 500 000	I → II →	N	1 500	0,10	0,25	0,40	1,0					
> 500 000	I → II →	P	800	0,065	0,15	0,25	0,65					
		Q	1 250	0,10	0,15	0,40						
		R	2 000	0,10								

1) The correspondence between lot size and sample size is determined by the inspection level. The sample size code letter to use is indicated by the head of the arrow corresponding to the given inspection level, usually up one row for level I and down one row for level II.

2) When no AQL value appears in the table for a selected code letter and LQ value, an arrow will indicate that the sample size has to be increased if it points downwards and decreased if it points upwards. The sample size and AQL value to be used correspond to the entry at the head of the arrow. When this sample size is greater than the lot size all items in the lot have to be inspected.

Table D6 — Correspondence between lot sizes and sample size code letters
(Inspection levels S-1 to S-4 and I to III, procedure B)

Lot size	Special inspection levels			General inspection levels		
	S-1 and S-2	S-3	S-4	I	II	III
2 to 90	E	E	E	E	E	F
91 to 150	E	E	E	E	F	G
151 to 280	E	E	E	E	G	H
281 to 500	E	F	F	F	H	J
501 to 1 200	E	E	F	G	J	K
1 201 to 3 200	E	F	G	H	K	L
3 201 to 10 000	E	F	G	J	L	M
10 001 to 35 000	E	F	H	K	M	N
35 001 to 150 000	E	G	J	L	N	P
150 001 to 500 000	E	G	J	M	P	Q
> 500 000	E	H	K	N	Q	R

NOTE – The sample size code letter indicates the appropriate row in table D5; it does not always indicate the sample size to be used directly since this can depend on the limiting quality. Levels S-1 and S-2, for example, give sample sizes independent of lot size but dependent on limiting quality, ranging from 13 to 800.

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