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

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

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

(c) The curves show the ability of the various cumulative sum sampling plans to distinguish between good and bad portions of production. The interpretation of these curves for portions of production is similar to the interpretation of the OC curves for stationary lots as illustrated in §42.140(c).
Agricultural Marketing Service, USDA § 42.143

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

[Sampling plans—AQL=0.25]

<table>
<thead>
<tr>
<th>Identification name of OC curves</th>
</tr>
</thead>
<tbody>
<tr>
<td>Reduced</td>
</tr>
<tr>
<td>Normal</td>
</tr>
<tr>
<td>tightened</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>n&lt;sub&gt;n&lt;/sub&gt;</th>
<th>T</th>
<th>L</th>
<th>S</th>
<th>n&lt;sub&gt;n&lt;/sub&gt;</th>
<th>T</th>
<th>L</th>
<th>S</th>
<th>n&lt;sub&gt;n&lt;/sub&gt;</th>
<th>T</th>
<th>L</th>
<th>S</th>
</tr>
</thead>
<tbody>
<tr>
<td>13</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>25</td>
<td>0.05</td>
<td>0.95</td>
<td>0.35</td>
<td>50</td>
<td>0.1</td>
<td>0.9</td>
<td>0.3</td>
</tr>
</tbody>
</table>

n<sub>n</sub>=Number of sample units in a subgroup. T=Subgroup tolerance. L=Acceptance limit. S=Starting value.
§ 42.143

Reduced, Normal, and Tightened Inspection Plans—Cumulative Sum Sampling Plans and Operating Characteristic (OC) Curves for AQL=1.5 Defects per Hundred Units

[Sampling plans—AQL=1.5]

<table>
<thead>
<tr>
<th>Identification name of OC curves</th>
<th>Reduced</th>
<th>Normal</th>
<th>Tightened</th>
</tr>
</thead>
<tbody>
<tr>
<td>( n )</td>
<td>( T )</td>
<td>( L )</td>
<td>( S )</td>
</tr>
<tr>
<td>13</td>
<td>0.5</td>
<td>0.5</td>
<td>0</td>
</tr>
</tbody>
</table>

\( n \) = Number of sample units in a subgroup. \( T \) = Subgroup tolerance. \( L \) = Acceptance limit. \( S \) = Starting value.

OC Curves - AQL = 1.5

- Reduced
- Normal
- Tightened

Quality of Submitted Portions of Production, 100p
(Defects per hundred units)
### Reduced, Normal, and Tightened Inspection Plans—Cumulative Sampling Plans and Operating Characteristic (OC) Curves for AQL=6.5 Defects per Hundred Units

**Sampling Plans—AQL=6.5**

<table>
<thead>
<tr>
<th>Identification name of OC curves</th>
<th>Reduced</th>
<th>Normal</th>
<th>Tightened</th>
</tr>
</thead>
<tbody>
<tr>
<td>$n_x$</td>
<td>$T$</td>
<td>$L$</td>
<td>$S$</td>
</tr>
<tr>
<td>13</td>
<td>1</td>
<td>2</td>
<td>1</td>
</tr>
<tr>
<td></td>
<td>50</td>
<td>2.5</td>
<td>3</td>
</tr>
</tbody>
</table>

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

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![OC Curves - AQL = 6.5](image-url)

PART 43—STANDARDS FOR SAMPLING PLANS

DEFINITIONS

Sec.
43.101 Meaning of words.
43.102 Definitions.

SAMPLING PLANS
43.103 Purpose and scope.
43.104 Master table of single and double sampling plans.
43.105 Operating characteristics (OC) curves.
43.106 Choosing AQL’s and sampling plans.

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

SOURCE: 29 FR 5870, May 5, 1964, unless oth-
erwise noted. Redesignated at 42 FR 32514,
June 27, 1977, and further redesignated at 46

DEFINITIONS

§ 43.101 Meaning of words.

Words used in this subpart in the sin-
gular form shall be considered to im-
part the plural, or vice versa, as the
 caso may demand.

§ 43.102 Definitions.

Statistical and inspection or sam-
pling terms and their respective defini-
tions that are used in the sampling
 plans and operating characteristic
curves of which are pertinent to the
understanding of inspection by at-
tributes follow:

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

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

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