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1. PURPOSE 目的

This document is intended to remind the controllers of the considerations and rules to be followed when taking samples during the inspection.

本文件旨在提醒控制人员在检查期间抽样时应遵循的注意事项和规则。

2. GENERAL 概述

MKS (Maximum Residue Level) refers to the limits of chemical residues that can be detected in plant and animal products. The results to be obtained in the tests to be carried out on finished products obtained from raw materials and raw materials should be within toxicologically acceptable limits. The results obtained from the tests should represent the total product.

MKS (最大残留水平) 是指植物和动物产品中可以检测到的化学残留限量。对原材料和原材料制成的成品进行的测试结果应在毒理学可接受的范围内。测试结果应代表总产品。

The controller approved by ETKO is authorized to take samples during the inspection.

The entrepreneur; certification must be taken or taken for its own safety and have it tested in an accredited laboratory. This is important for its own safety. Etko can take a sample and run a test when it detects a suspicious situation. In this case, the entrepreneur must allow the ETKO controller.

经艾拓克批准的控制员有权在检查期间抽样。

企业家必须为了自身安全而取得或取得认证，并在经认可的实验室进行测试。这对其自身安全很重要。当艾拓克检测到可疑情况时，它可以抽样并进行测试。在这种情况下，企业家必须准许艾拓克控制员。

3. DESCRIPTIONS 描述

Sending 发送

A certain amount of products offered, shipped, or received at once
一次性提供、运送或接收的一定数量的产品

lot 批次

Defined quantity of a shipment that is supposed to have the same characteristics
应具有相同特征的一批货物的定义数量

increment 增量

Quantity of products received at once from a single point in a party
一次性从一方的单个点接收的产品数量

Bulk Sample 大宗样品

A quantity of product obtained by combining and mixing all increases from the same batch
通过组合和混合来自同一批次的所有增量而获得的产品数量

Laboratory sample 实验室样品

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A sample obtained by dividing the reduced sample and intended for analysis or other examinations, representing the quality and condition of the party

通过分割减少的样品而获得的样品，用于分析或其他检查，代表该方的质量和状况。

NOTE At least three laboratory samples are normally produced for each sample taken. One of these must be submitted for testing and at least one must be stored by ETKO for reference purposes. One of them must be delivered to the entrepreneur. All samples must be able to meet the minimum quantity requirement.

注意：通常，每次抽样

至少会产生三个实验室样品。其中一个必须提交测试，并且至少一个必须由艾拓克存储以供参考。其中一个必须送还给企业。所有样品必须能够满足最低数量要求。

4. SAMPLING PROCEDURE 抽样程序

4.1 Precautions to Be Taken 应采取的预防措施

The controller first performs general macroscopic control of the plant and herbal products that are requested to be controlled and their environment and ambalás. Inspection of products and ambalás that do not need to be sampled and subjected to any processing is carried out on site. However, if in case of doubt, a sample is taken for diagnosis from the part that is presumed to be the dish.

控制者首先对被要求控制的植物和草药产品及其环境和成分进行宏观控制。对不需要抽样和经过任何处理的产品和材料进行现场检验。然而，如果有疑问，则从被认为是装盘的部分采集样本进行诊断。

Samples are taken from the trotter prepared according to the method of sampling, which represents the entire product, each batch, each lot and each group of plants, and, if necessary, separately for each variety. The owner or his authorized representative is obliged to give the necessary amount of samples to the controller tasked with taking samples.

样品取自按照抽样方法制备的菜栏，代表整个产品、每批号、每批次和每组植物，必要时还可针对每个品种单独抽样。业主或其授权代表有义务向负责抽样的控制人员提供必要数量的样品。

Samples to be taken at all stages should be taken without contamination or deterioration because this can have a negative effect on analytical results. Samples can be taken separately from each lot to be checked for compliance.

在所有阶段采集的样品都应无污染或无变质，因为这会对分析结果产生负面影响。可从每批产品中单独采集样品，以检查是否符合要求。

4.2 Preparation of laboratory sample 实验室样品制备

Samples representing the product, lot or batch from different regions are homogeneously divided into 3 parts. The sample divided into 3 parts is placed in 3 suitable packaging packages. Sample packages are sealed and labeled. One of the 3 samples is left as a witness

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to the entrepreneur, one is taken by the controller to be given to the laboratory so that it can be witnessed in ETKO.

将代表不同地区产品、批号或批次的样品均匀分成 3 份。分成 3 份的样品放入 3 个合适的包装袋中。样品包装密封并贴上标签。3

个样品中的一个留给企业作为见证，另一个由控制员取走交给实验室，以便在艾拓克就可以看到。

If the required amount for the laboratory sample is exceeded, this amount must be divided to represent the entire lot. The reduction process should be so that it does not distort the original size. Fresh vegetables and fruits should never be cut or broken.

如果超出实验室样品所需的量，则必须将该量分成代表整个批次。减少过程应确保不会扭曲原始尺寸。新鲜蔬菜和水果绝不能被切割或弄碎。

4.3 Recording of the sample taken 采集样本记录

The sample taken by the ETKO controller is recorded in the "OP 03 F01 Sampling Form". The ETKO Controller who received the sample records the report number, name and number of the entrepreneur on the registration form. In addition, the unit number, unit name and address from which the sample was taken are recorded. The characteristics of the sampled product and the amount of sample, seal numbers and the name of the controller who took the sample are also indicated. The analysis group in which the sample is requested should also be marked.

艾拓克控制员所采集的样品记录在“OP 03 F01 抽样表”中。接收样品的艾拓克

控制员在登记表上记录报告编号、企业名称

和编号。此外，还记录了样品采集的单位编号、单位名称和地址。还标明了采样产品的特性和样品量、封条编号和采集样品的控制员姓名。还应标明请求样品的分析组。

4.4. Packaging and sending of laboratory sample 实验室样品的包装和寄送

The laboratory sample should be placed in a clean and sheltered box that will not cause any contamination or deterioration. Sample containers must ensure that the characteristics of the sample are maintained until the test is carried out. It should be large enough to be almost completely filled with the sample. This can be undetected and sealed so that it cannot be resealed.

实验室样品应放置在干净、有遮蔽的箱

子中，不会造成任何污染或变质。样品容器必须确保样品的特性在测试进行之前保持不变。它应该足够大，几乎可以完全装满样品。它可以不被检测到并密封，以便无法重新密封。

The box must be sealed, labeled using OP 03 F 02 Sample Label and the OP 03 F 01 Sampling Form attached. The sealed box or package must be delivered to an accredited laboratory with a secure cargo company or Laboratory representative.

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箱子必须密封，并使用随附的 OP 03 F 02 样品标签和 OP 03 F 01 抽样表进行标记。密封的箱子或包裹必须通过安全货运公司或实验室代表运送到认证实验室。

4.5. Evaluation of laboratory results and certification decision 实验室结果评估和认证决定

The decision to certification also depends on the positive results of laboratory analysis. A chemical residue that exceeds the national MKS (Maximum Residue Level) limits may result in the product being banned from certification. The entrepreneur is obliged to explain to ETKO the reasons for the residue. ETKO evaluates the statements made and informs the entrepreneur of the results and, if requested, to the officials of the Ministry of Agriculture and Rural Affairs. When the explanations are not satisfactory, ETKO evaluates the causes of residue by examining them on site.

认证决定还取决于实验室分析的积极结果。超过国家 MKS（最大残留水平）限制的化学残留物可能会导致产品被禁止认证。企业有义务向艾拓克解释残留的原因。艾拓克评估所做的陈述并将结果告知企业，如果需要，还会告知农业和农村事务部的官员。当解释不令人满意时，艾拓克会通过现场检查来评估残留的原因。

4.6 Residue Detection Status 残留检测状况

The entrepreneur or his representative makes his objections regarding the examination result of the samples to be taken in writing to ETKO no later than 7 days after the result is notified to him. ETKO handles the objection in accordance with its procedures and can ask the experts for opinions if necessary. A second analysis can be performed if necessary according to the conclusion to be reached.

企业家或其代表在收到结果通知后 7 天内以书面形式向艾拓克提出对所抽样品检验结果的异议。艾拓克将按照其程序处理异议，并在必要时征求专家意见。根据要得出的结论，必要时可以进行第二次分析。

5. SAMPLING PRINCIPLES 抽样原则:

5.1 ISO 4697

- a) For products in bulk or bulk containers, the minimum number of randomly selected increments will be as specified in Table 1.
- a) 对于散装或散装容器中的产品，随机选择的增量的最小数量将按照表 1 中的规定。

Mass of the party m tonne 该组质量的吨数 m	Minimum number of increments 最小增量数
Up to 2.5 tons 小于 2.5 吨	7

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More than 2.5 tons 大于2.5吨	$\sqrt{20m}$ up to a maximum of 100 $\sqrt{20m}$ 最大至100
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b) When the products are in the packaging, the minimum number of randomly selected packages from which sample increases are received will be as follows:

b)当产品在包装中时，随机抽取的包装中抽取的样品增加量的最小数量如下：

Number of packets in the party 组内的包数 n	Minimum number of packets to sample 要采样的最小包数
1 to 4 1到4	From each package 从每个包装
5 to 16 5到16	4
more than 16 大于16	$\sqrt{20n}$ up to a maximum of 100 $\sqrt{20n}$ 最大至100

Instance size实际大小

Lot size tonne 每批次大小吨量	Minimum mass Sample mass Kg 最小样品量千克	Minimum reduced sample mass *a kg 最小损耗样品量*a 千克	Minimum sample laboratory mass 最小实验室样品量
1	4	2	0,5
1 - 5	8	2	0,5
5 - 50	16	2	0,5
50 - 100	32	2	0,5
100 - 500	64	2	0,5
A) This is the minimum amount required for three laboratory samples 这是三个实验室样本所需的最低量			

Note: When sampled products in bales, randomly take the minimum number of bales required according to the above methods.

注意：当按包抽样时，按上述方法随机抽取所需的最少包数。

5.2 Sampling liquids 液体抽样

5.2.1 Sampling from the tanta 塔中抽样

If the product in the tank is precipitated and there is a possibility that it is heterogeneous, mix it and use the appropriate apparatus to remove increases from the upper span of the

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tank from the mixing batch. If mixing cannot be done before sampling, take increments during filling or draining of the liquid. In such cases, if sampling cannot be performed while the batch is on the go, make increments throughout the lot to ensure that representative laboratory samples are obtained.

如果罐中的产品沉淀，并且有可能是均匀的，则将其混合，并使用适当的设备从混合批次中去除罐上跨度的增加物。如果在抽样前无法进行混合，则在液体填充或排出时取增量。在这种情况下，如果在批次进行过程中无法进行抽样，则在整个批次中进行增量，以确保获得具有代表性的实验室样品。

5.2.2 Sampling from barrels 桶中抽样

Before receiving the increments, mix the contents of each randomly selected barrel for sampling. It can be carried out by mixing, immersion, or shaking. Get increments from mixed material.

在收到增量之前，将每个随机选择的桶的内容物混合起来以供抽样。可以通过混合、浸泡或摇动来进行。从混合材料中获取增量。

If pre-mixing is not possible, take at least two increases from each barrel in different directions and from at least two regions (top and bottom).

如果不可能进行预混合，从每个桶的不同方向和至少两个区域(顶部和底部)取至少两个增加量。

Number of containers in the party n 一组集装箱数量n	Minimum number of containers to sample 样品的最小容器数量
1 - 4	1 per unit 每单元1
5 - 16	4
More than 16 大于16	\sqrt{n} up to a maximum of 100 \sqrt{n} 最大至100

Sampling size 样品大小

Minimum mass or volume sample 样品最小质量或者体积		Minimum mass or volume of the reduced sample a* 最小样品损耗质量或体积a*		Minimum mass or laboratory sample volume 实验室最小样品质量或体积	
Kg 千克	Litre 升	Kg 千克	litre 升	Kg 千克	litre 升

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8	8	2	2	0,5	0,5
<p>a* This is the minimum required for up to three laboratory samples. a* 这是最多三个实验室样品的最低要求。</p>					

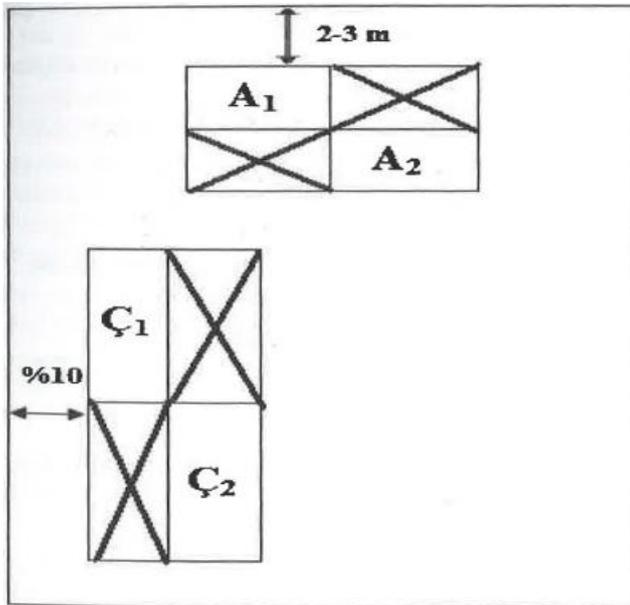
5.3 Sampling textile products 纺织品抽样

When taking samples in the textile business, it should be noted that it is from an area that is considered more risky. Sampling is taken in accordance with the following rules.

在纺织行业抽样时，应注意抽样区域是否具有较高的风险。抽样应按以下规则进行。

1. If samples are taken from the ball fabric, the head and end of the ball should not be sampled. It should be taken from the inside at least 2 meters.
如果从球织物上抽样，则不应从球头部和尾部抽样。应从至少 2 米的内部抽样。
2. No samples should be taken from the fabric edge. The fabric should be taken from the inside up to 10% of the neck.
不应从织物边缘抽样。应从内部抽样，直至颈部 10%。
3. When taking a sample, the fabric should be taken after it is properly placed on a smooth floor without stretching.
抽样时，应将织物正确放置在光滑的地板上，不要拉伸。
4. The fabric should not be sampled from wrinkled, folded places.
不应从织物有褶皱、折叠的地方抽样。
5. Samples should not be taken from the faulty parts of the fabric.
不应从织物有缺陷的部分抽样。
6. Samples should be taken from different parts of the fabric. Especially the samples taken in strength tests should not contain the same weft and warp threads. However, in wet strength tests, the same weft and warp direction can be used to compare fabrics. 应从织物的不同部分抽样。特别是在强度测试中取的样品不应包含相同的纬纱和经纱。但是，在湿强度测试中，可以使用相同纬纱和经纱方向来比较织物。

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The sample quantity must be at least 1.5 meters. The sample taken should be divided into 3 equal parts and sealed, each placed in the packages provided by ETKO. One of the equally packaged and sealed samples should be marked on the label so that one is given to the customer, one is a witness in ETKO and the other is given to the laboratory. The sample form should be filled out and the customer should be signed by writing the quantity lot/batch number represented by the product, the customer license number and the seal number in the sampling package. An instance of the sampling form must be left in the customer.

样品数量必须至少为 1.5 米。所抽样品应分成 3 等份并密封，每份放入艾拓克提供的包装中。应在标签上标记包装和密封的样品之一，以便一份交给客户，一份作为艾拓克

的见证，另一份交给实验室。应填写样品表格，并让客户签字，写上产品所代表的数量批号、客户许可证号和抽样包装中的密封号。必须将抽样表格的实例留给客户。

5.4 Sampling cosmetic products 化妆品抽样

5.4.1 Taking samples from the tanta 从塔中取出样品

If the product in the tank is precipitated and there is a possibility that it is heterogeneous, mix it and use the appropriate apparatus to remove increases from the upper span of the tank from the mixing batch. If mixing cannot be done before sampling, take increments during filling or draining of the liquid.

如果罐内产品沉淀，且有可能是非均匀的，则应混合，并使用适当的设备从混合批次中除去罐上跨度的增量。如果在抽样前无法进行混合，则在加注或排出液体时采取增量。

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5.4.2 Sampling of Packaged Products 包装样品抽样

When taking samples in the cosmetics business, it should be noted that it is from the area that is considered more risky. The sample quantity should be at least 3 pieces, 6 of the products with the amount under 10 ml/gr can be taken. The sample taken should be divided into 3 equal parts and sealed, each placed in the packages provided by ETKO. One of the equally packaged and sealed samples should be marked on the label so that one is given to the customer, one is a witness in ETKO and the other is given to the laboratory. The sample form should be filled out and the customer should be signed by writing the quantity lot/batch number represented by the product, the customer license number and the seal number in the sampling package. An instance of the sampling form must be left in the customer.

在化妆品行业抽样时，应注意抽样区域被认为风险较大。样品数量至少应为 3 件，可取 6 件含量低于 10 ml/gr 的产品。所抽样品应分成 3 等份并密封，每份放入艾拓克提供的包装中。包装和密封的样品之一应在标签上标记，以便一份交给客户，一份在艾拓克作为见证，另一份交给实验室。应填写样品表格并让客户签字，写上产品所代表的数量批号、客户许可证号和抽样包装中的封条号。必须将抽样表格的实例留给客户。

5.5 Principles of Sampling of Sacked Plants and Herbal Products 袋装植物和草药产品的抽样原则

5.5.1 In cases where the controller deems it suspicious after the general control 在一般控制后，控制者认为有可疑的情况；

- A) From nuts, walnuts, almonds and dried figs, grapes, apricots and similar dried fruits
A) 坚果、核桃、杏仁、无花果干、葡萄、杏子和类似的干果；

1 – 10	up to the sack 满袋	1-2
10 – 25	up to the sack 满袋	3-4
25 – 50	up to the sack 满袋	5-6
50 – 100	up to the sack 满袋	7-8
100 – 500	up to the sack 满袋	9-10
500 - 1.000	up to the sack 满袋	10-19 sacks 袋

For more than 1,000 sacks, 2% of the number of sacks is opened incidentally according to the condition of the product and at least one kg of samples are taken. The trotters made from these samples are taken for analysis according to the following principles.

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对于超过1000袋的，根据产品情况，随机打开2%的袋子，并抽取至少1公斤的样品。根据以下原则，取出用这些样品制成的样品进行分析。

100	up to the sack满袋	about 1 kg
100 - 500	up to the sack满袋	about 1.5 kg
500 - 1.000	up to the sack满袋	about 2 kg
1.000	for more than a sack 大于一麻袋	approximately 2.5 kg of samples are taken. 大约取样2.5千克。

B) Cereals, pulses, flour and flour, pulp, citacts, bran, nails, ground acorns, harnup, sunflower and similar seeds and plant parts;

B) 谷物、豆类、面粉及面粉制品、果肉、水果、麸皮、钉子、磨碎的橡子、榛子、向日葵和类似的种子和植物部分；

1 - 10	up to the sack满袋	1-2
10 - 25	up to the sack满袋	3-4
25 - 50	up to the sack 满袋	5-6
50 - 100	up to the sack满袋	7-8
100 - 500	up to the sack满袋	9-10
500 -1.000	up to the sack满袋	10-19 sacks袋

For more than 1,000 sacks, 2% of the number of sacks is opened by chance and at least one kg of samples are taken. The trotters made from these samples are taken for analysis according to the following specified principles.

对于超过1000袋的批次，随机打开2%的袋数，并至少取1公斤样品。然后根据以下指定的原则对这些样品中的蹄进行分析。

100	up to the sack满袋	about 1 kg
100 - 500	up to the sack满袋	about 2 kg
500 - 1.000	up to the sack满袋	about 3 kg
1.000 - 10.000	up to the sack满袋	about 4 kg
10.000	for more than a sack 大于一麻袋	up to 5 kg of samples are taken 最多取样5千克。

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C) Baleen cotton, tobacco and similar products;
C) 须鲸棉、烟草及类似产品;

100 bales	or equivalent	3 bales or equivalent
100 - 500 bales	or equivalent	5 bales or equivalent
500 - 1,000 bales	or equivalent	10 bales or equivalent

More than 1,000 bales or equivalents for every 1,000 bales or equivalents are opened and examined on site. If suspected by the controllers, he is subjected to a delusional examination. 每1000包或等价物超过1000包或等价物，现场开箱检查，如被管控人员怀疑，则对其实施瞒报检查。

5.6 Principles of Sampling products made with Cardboard-Wood-Plank Box用纸板-木板箱制成的产品的抽样原则

After the general check of the controller, 2% of the number of boxes up to 500 boxes, and 1% for after 500 boxes, the box is opened incidentally according to the condition of the product and at least one kg of samples are taken. The trotters made from these samples are taken for analysis according to the following principles.

管理员进行全面检查后，根据产品状况，在 500 箱以内，抽取箱数的 2%，超过 500 箱，抽取箱数的 1%，并随机打开箱子，抽取至少 1 公斤的样品。根据以下原则，将这些样品制成的样品进行分析。

100	up to the box满盒	1 kg
500	up to the box满盒	1.5 kg
500 - 1.000	up to the box满盒	2 kg
1.000	approx. for more than a box 接近大于一盒	2.5 kg sample taken 取样2.5千克

5.7 Principles of Sampling of Crated and Crateded Plants and Herbal Products装箱和装箱植物和草药产品的抽样原则

The product is checked by the controller before being tarnished at the origin or processing site. In consumer-ed and crated plants and herbal products imported with batches that cannot be controlled or delayed during the inspection for various reasons, 2% of the number of crates up to 1000 cases and 1% for after 1000 cases are opened and examined. In cases where the controller deems it suspicious, at least 1 kg of trotters made from samples to be taken;

产品在原产地或加工地点被污染之前由控制员检查。对于进口的消费品和装箱植物和草药产品，如果批次无法控制或因各种原因在检查期间延误，则打开并检查 1000 箱以下的 2% 的箱数，1000 箱之后的 1%。如果控制员认为可疑，至少要抽取 1 公斤样品；

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100 crates箱	or up to the safe满箱	1 kg
100 - 500 crates箱	or up to the safe满箱	1.5 kg
500 - 1,000 crates箱	or up to the safe满箱	2 kg
1,000 crates箱	or for more than a safe大于一箱	2.5 kg sample taken 取样2.5千克

5.7.1 Age Fruits and Vegetables and Cutting Flower Sampling Principles 老化果蔬和切花抽样原则

The product is checked before it is ambalâjed at the processing site. During the ambalalama, 2 of every 100 ambalas are accidentally opened and checked for consumption products imported by parties that cannot be controlled or exported for various reasons. If the controller deems it suspicious, the sample is taken for diagnostic purposes and sent to the laboratu. However, in the control of manger and edible potatoes, 200 tubers are sampled from each 100-ton batch for laboratory analysis.

该产品在加工地点进行包装前会进行检查。在包装过程中，每100个包装中有2个会因无法控制的进口方或因各种原因出口而被意外打开并进行消费品检查。如果检查员认为可疑，则会采集样本用于诊断并送至实验室。但在土豆管理和食用土豆的控制中，每100吨批次会从中采集200个块茎进行实验室分析。

5.7.2 Principles of Sampling Dried Vegetables 干制蔬菜抽样原则

1% of the weight of dried vegetables, which are requested to be checked, is examined. In cases where suspected, 2% of the material examined is sampled.

要求检查的干菜重量为 1%，如有怀疑，则抽取 2% 的样品。

5.8 Sampling Principles from Production and Reproduction Materials 加工和再生材料

Seeding and other production and reproduction materials are sampled according to the following principles;

种子和其他加工、再生材料的采样按照以下原则进行；

5.8.1 Seeds 种子:

If the seeds are ambalalâjed in sacks, packages and similar ways, they are divided into batches with the weight specified in the first column of ANNEX-1, which is prepared taking into account the size of the calf. Samples are taken from each batch as much as specified in the second column, the amount in the second column is taken by making the trotters, and the samples are subject to examination. However, in the control of seed potatoes, 200 tubers are sampled from each 100-ton batch for laboratory analysis.

如果种子以麻袋、包裹或类似方式包装，它们会被分成重量符合附件1第一列中指定的批次，附件-1的编制考虑了皮

的大小。样品按第二列所列的数量从每批中抽取，第二列中所列的数量通过制作样本

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来抽取，并对样品进行检查。然而，在种子土豆的检测中，每100吨的批次中会抽取200个土豆进行实验室分析。

If the sample is stacked or cast, the number of samples specified in ANNEX-2 is taken from each batch. These samples are made into trotters, the amount specified in the second column of ANNEX-1in is taken from this mixture and subjected to examination.

如果样本是堆叠或铸造的，那么从每个批次中取出附件-2中指定数量的样本。这些样本被制成混合物，然后从这个混合物中取出附件-1第二列中指定的数量，并对其进行检查。

If the vehicle carrying the seed in bulk or bulk has independent sections, a specified number of samples are taken from each of these independent sections in ANNEX-2 to be made of trotters. Samples taken to represent a party are mixed and examined by taking as many samples as specified in the second column of ANNEX-1in.

如果装载种子的车辆是散装或有独立隔间的，那么从附件-2中指定的每个独立隔间中取出一定数量的样本，这些样本被制成混合物。代表一个批次的样本被混合后，按照附件-1第二列中指定的数量进行检查。

5.8.1.1 Sampling for GMO Analysis in Seeds种子中转基因生物(GMO)分析的采样

a) Seedings for production, commercial and demonstration purposes:

a) 用于生产、商业和示范用途的种子:

Seeds belonging to the same lot/party; if the sack, package and similarly ambalala is prepared taking into account the size of the calf and is divided into sub-lots/batches with the weight specified in the first column of the Table in Table-1. Each sub-lot/party is sampled as much as the amount specified in the second column to represent this subtom/party. From the trotters made of these samples, the amount specified in the third column is taken and sent to the laboratory.

属于同一批次/货件的种子；如果麻袋、包装或类似的包装方式是根据皮的大小来准备的，并且按照表-1中的表格第一列指定的重量分为准批次/批次。每个准批次/货件都按照第二列指定的数量进行采样，以代表该准批次/货件。从这些样品混合而成的混合物中，取出第三列指定的数量送往实验室。

b) Seedings for trial and research purposes:

b) 用于试验和研究目的的种子:

All varieties of the same species in each control document of the seeds contained in table-1 to be imported for trial, research and breeding purposes are considered a lot/batch. A sufficient amount of seed from the varieties that make up this lot/batch is made of trotters

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and the amount specified in the third column of table-1 is taken and sent to the laboratory. If GMO is detected as a result of the analysis, all varieties that make up the lot/batch are considered dishes.

用于试验、研究和育种目的的所有同一物种的品种，在表-1中包含的每个控制文件中的种子都被视为一个批次/货件。从组成这个批次/货件的品种中取出足够数量的种子，制成混合物，然后取出表-1第三列指定的数量并送往实验室。如果分析结果显示检测到转基因生物(GMO)，那么构成该批次/货件的所有品种都被视为不合格

However, if the owner of the property requests it and there are enough seedings to obtain the required amount of samples; Samples taken separately from the varieties in each lot/batch in the trol are sent to the laboratory. As a result of the analysis, the varieties detected in GMO are returned or destroyed.

然而，如果持有者要求，并且有足够的种子来获取所需的样本数量；那么从每个批次/货件中的各个品种中单独取出的样本将被送往实验室。分析结果显示检测到GMO的品种将被退回或销毁。

In cases where the imported seed seeds for trial, research and breeding purposes are less than 10 (ten) times the sample quantity specified in the third column of table-1, the amount specified in Table-2 will be taken for GMO analysis. In this case;

如果用于试验、研究和育种目的进口的种子数量少于表-1第三列指定的样本数量的10倍，那么将按照表-2指定的数量取出样本进行GMO分析。在这种情况下；

1- The amount of samples required for analysis on a species basis (in quantity or gram) should be 10% of the amount of seeds imported.

1- 需要分析的样本数量（按数量或克数计）应为进口种子数量的10%。

2- The amount of samples to be taken should never be less than the quantities specified in table-1.

2- 所抽样本的数量不应少于表-1中指定的数量。

3- If there is more than one variety within a seed type subject to import, a single sample should be created by combining the sample amount to be taken by 10% from each of these varieties. In this case, if GMO is detected as a result of the analysis, all varieties that make up the lot/batch are considered dishes.

如果进口的种子类型中有多个品种，应通过合并每个品种的10%样本量来创建一个单一的样本。在这种情况下，如果分析结果显示检测到转基因生物（GMO），则构成该批次/货件的所有品种都被视为不合格。

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Table 1 Table of Maximum Weights and Minimum Sample Quantities of Seed Batches to Be Based on Sampling

表1 种子批次的最大重量和最小样本数量抽样表

SEED TYPE 种子类型	COLUMN 1 列 1	2.COLUMN 列 2	3.COLUMN 列 3
	THE MINIMUM OF SEED SUB-PARTY (Kilogram) 种子小批的最小重量 (千克)	ASGARİ SAMPLE MIKTARI (Gram) TO BE TAKEN FROM SEED SUB-PARTY 从小批种子中抽样的重量 (克)	SAMPLE QUANTITY (Gram) TO BE SENT TO THE LABORATORY 送往实验室的样本数量 (克)
Egypt 埃及棉	50.000	3.000	3.000
Paddy 水稻	10.000	400	400
Soy 大豆	20.000	2.000	2.000
Sugar Beet 甜菜	5.000	85	85
Cotton 棉花	10.000	800	800
Rapes up, Canola 油菜籽	5.000	100	100
Tomato (Production, commercial, demonstration) 番茄 (生产、商业、示范)	100	20	20
Tomato (Trial, research) 番茄 (试验、研究)	-	-	12
Potato 土豆	25.000	10.000	10.000
Papaya 木瓜	10.000	5.000	5.000
Wheat 小麦	20.000	3.000	3.000
Bean 豆类	20.000	2.000	2.000
Eggplant 茄子	100	20	20
Pumpkin 南瓜	500	2.000	2.000
Sweet Pepper 甜椒	100	20	20
Sugar cane 甘蔗	-	10-100	
Chicory 菊苣	1000	100	100
Melon 瓜类	500	2.000	2.000
Plum (Steel-Sapling) 李子 (实生苗)	-	5-25 Pieces 颗	5-25 Pieces 颗
Red Lentils 红扁豆	10.000	800	800

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	Sampling Method 抽样方法	Doc. Nr	TI 05
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Clover 三叶草	1.000	500	500
flax 亚麻	1.000	350	350
Poplar (Steel-Sapling) 白杨 (实生苗)	-	-	5-25
Petunia seedlings 矮牵牛 (幼苗)	-	-	10-100
Petunia seed 矮牵牛 (种子)	100	20	20
Clove seedlings 郁金香 (幼苗)	-	-	10-200
Clove seed 郁金香 (种子)	100	20	20
Rose 玫瑰	-	-	5-25
Turnip 萝卜	70	100	100
Grass 牧草	2.000	100	100
Tobacco 烟草	50	2	2
Apple 苹果	-	5-25 Pieces 颗	5-25 Pieces 颗

Table 2 Table of Maximum Weight and Minimum Sample Quantities of Seed Batches to Be Based on Sampling from seed seeds for trial, research and breeding purposes

表2 用于试验、研究和育种目的的种子批次最大重量和最小样本数量抽样表

SEED TYPE 种子类型	MIC TO BE TAKEN FROM SEED PARTY (QUANTITY) 从种子批次中抽样的数量 (个)	MIC TO BE TAKEN FROM SEED PARTY (GRAM) 从种子批次中抽样的重量 (克)
Egypt 埃及棉	5 (7)	1,5
Paddy 水稻	50	1,5
Soy 大豆	10	1,5
Sugar Beet 甜菜	150	1,5
Cotton 棉花	15	1,5
Rapes up, Canola 油菜籽	150	1,5
Tomato (Production, commercial, Demonstration) 番茄 (生产、商业、示范)	400 (450)	1,5
Tomato (Trial, research) 番茄 (试验、研究)	400 (450)	1,5

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Potato 土豆	10	-
Papaya 木瓜	15	1,5
Wheat 小麦	40	1,5
Bean 豆类	8	1,5
Eggplant 茄子	300	1,5
Pumpkin 南瓜	10	1,5
Sweet Pepper 甜椒	225	1,5
Sugar cane 甘蔗	1-5	-
Chicory 菊苣	5	1,5
melon 瓜类	40	1,5
Plum (Steel-Sapling)李子 (实生苗)	1-5	-
Red Lentils 红扁豆	40	1,5
Clover 三叶草	825	1,5
Flax 亚麻	160	1,5
Poplar (Steel-Sapling)白杨 (实生苗)	1-5 Pieces 颗	-
Petunia seedlings矮牵牛 (幼苗)	2-10	-
Petunia seed矮牵牛 (种子)	5	1,5
Clove seedlings郁金香 (幼苗)	2-10	-
Clove seed郁金香 (种子)	5	1,5
Rose 玫瑰	1-5 Pieces 颗	-
Turnip 萝卜	500	1,5
Grass 牧草	825	1,5
Tobacco 烟草	15.000	1,5
Apple 苹果	1-5 Pieces 颗	-

5.8.2 Flower bulbs, tubers, rhizomes, seedlings, seedlings, vaccine eyes, vaccine pens and the like花卉球茎、块茎、根茎、幼苗、树苗、疫苗蕊、疫苗尖等：：

All original ambalâjs of small parties are opened and examined. In large batches, 2% of the ambalas are opened and examined for examination of those with safes or sacks. 2% of the amount examined is taken and sent to the laboratuara for analysis. However, samples to be taken at 2% cannot be in quantities below or above the lower limit. If there are subtypes of these varieties for these limits, flower bulbs, tubers, rhizomes, seedlings, vaccine eyes and so on, at least 10, maximum 100 pieces of these are taken and trotters are made and at least 10, maximum 100 samples are taken from this trotter. For saplings, at least 5 samples and a maximum of 25 samples are taken.

所有小批次的原始包装都被打开并检查。在大批次中，为了检查那些有安全包装或麻袋的，打开并检查2%的包装。从检查的数量中取出2%并送往实验室进行分析。然而，

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所取的2%样本量不能低于或超过下限。如果这些品种有这些限制的亚型，花卉球茎、块茎、根茎、幼苗、疫苗眼等，至少取10个，最多100个这样的样本，制成混合物，然后从这个混合物中至少取10个，最多100个样本。对于树苗，至少取5个样本，最多取25个样本。大批次中要检查的包装比例根据批次大小在2-5%之间检查。

The proportion of packaging to be examined in large batches is examined between 2-5% according to the party size.

在大批次中，根据批次的大小，要检查的包装比例在2-5%之间。

5.8.3 Logging, Log and Timber Sampling Principles 伐木、原木和木材抽样原则

On-site inspection of logs, logs and timber by the controller is essential. If it is necessary to take a sample for the control of the laboratuar, the sample is taken by cutting from the dish part with disease and pest.

监管人员对木材、原木和木材进行现场检查是必要的。如果需要为了实验室控制抽样，样本应通过从有病害和害虫的缺陷部分切割来获取。

5.8.4 Principles of Sampling from Soiled or Potted Plants 土壤栽培或盆栽植物抽样原则

In vegetatively developed soiled or potted plants, checks should be performed macroscopically due to the macroscopic appearance of the symptoms of the disease, and samples should be sent to the relevant institutes in case of doubt. Samples are taken for soil analysis of soiled plants. If the plants brought in are of many species and varieties, soil samples are taken by grouping the plants when necessary, except for the plants that have special conditions in the Agricultural Quarantine Regulation. It is sent for analysis to represent that group, made from soil samples taken from plants in this group, such as coniferous, palm trees, single-year plants, shrub-shaped plants.

在营养生殖发育良好的土壤栽培或盆栽植物中，应根据疾病症状的宏观表现进行宏观检查，如有疑虑，应将样本送至相关机构。对于土壤栽培的植物，应取土壤样本进行分析。如果引进的植物种类和品种繁多，必要时应将植物分组，除了农业检疫法规中有特殊条件的植物外，代表该组的土壤样本应由该组植物中取的土壤样本制成，如针叶树、棕榈树、一年生植物、灌木状植物。

5.9 ISO 1130-1975 Textile fibers — Some sampling methods for testing 纺织纤维 — 部分试验抽样方法

5.9.1 Sampling Methods For Bast Fibres 韧皮纤维的抽样方法

5.9.1.1 Field of application 应用范围

Raw bast fibres are usually sampled only for fibre fineness and fibre strength and the methods adopted depend on the type of bast fibre. Flax-and hemp need different handling from jute and kenaf.

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原始韧皮纤维通常仅用于纤维细度和纤维强度的抽样，采用的方法取决于韧皮纤维的类型。亚麻和汉麻需要与黄麻和洋麻不同的处理方法。

Method A applies to bales or other bulks of bast fibres such as flax and hemp in the raw state and to bulks of dressed line in bunches.

方法A适用于原始状态下的亚麻和汉麻等韧皮纤维的捆包或其他大宗，以及成束的加工过的线束。

Method B applies to bales or bulks of jute or kenaf in the raw state

方法B适用于原始状态下的黄麻或洋麻的捆包或其他批量。

5.9.1.2 Sampling the bulk 批量抽样

Take a representative sample by abstracting small sub-samples from various parts of the bulk and reduce each of these to a convenient number of fibres by repeated halving.

通过从批量的不同部分提取小的子样本，并通过对半分割的方式将每个子样本减少到一个方便的纤维数量，来获取代表性样本。

5.9.1.2.1 Method A 方法 A

Select a number of bunches (preferably not less than twenty) at random from various parts of the bale or bulk, and remove a strick of fibre from each one. Divide each strick lengthwise by gripping the centre and pulling transversely to the length of the fibres to separate the two portions. Discard one portion and retain the identity of the root and tip of the retained portion. Repeatedly halve the retained portion until the amount of fibre retained is sufficiently small. Make a composite sample for test purposes by combining the retained fibre from each strick, placing root ends together and tip ends together.

从捆包或大批量

的各个部分随机选择一定数量的束（最好不少于二十个），并从每一个中移除一根纤维束。通过握住中心并横向拉动，将每根纤维束纵向分割成两部分，以分离两部分。丢弃其中一部分，并保留部分的根部和尖端。重复将保留的部分对半分割，直到保留的纤维量足够小。通过组合每个纤维束中保留的纤维制成复合样本，用于测试目的，将根部放在一起，尖端放在一起。

5.9.1.2.2 Method B 方法 B

Take a number of heads of jute (preferably not less than fifty) at random from the bulk, and remove a reed from each head. Cut each of these reeds into root end, middle, and tip end, keeping the sections separate and the corresponding cut lengths from all reeds bundled together. Then tease out each-of the three composite bundles by hackling on pins, or by other means, to remove cross-linked and tangled fibres.

从大批量

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中随机选取一定数量的黄麻头（最好不少于五十个），并从每个黄麻头中移除一根茎。将这些茎切成根部、中部和尖端，保持各部分分开，并将所有茎的相应切割长度捆绑在一起。然后通过针梳理或其他方式梳理这三个复合束，以去除交叉链接和缠绕的纤维。

For determinations of fibre fineness and single fibre breaking load, cut small bundles of fibres, each weighing a few milligrams and of fixed length (30 mm is suitable), from a composite bundle at a number of points and put them together to form a test sample (25 mg is often a convenient mass).

对于纤维细度和单纤维断裂负荷的测定，从复合束中在多个点切割小束纤维，每个小束纤维重量几毫克，长度固定（30毫米合适），并将它们组合成一个测试样本（25毫克通常是方便的质量）。

5.9.2 Sampling Method for Cotton Fibers 棉纤维抽样方法

5.9.2.1 Field of application 应用范围

Clause 4 gives methods for the preparation of numerical laboratory samples.

The methods described in 4.2 to 4.6 are applicable to bulks of cotton fibres in various forms.

The methods described in 4.6.1 to 4.6.3 are applicable to all fibres spun on the cotton system.

条款4提供了数值实验室样本的制备方法。

4.2至4.6中描述的方法适用于各种形式的大宗棉花纤维。

4.6.1至4.6.3中描述的方法适用于所有在棉系统上纺纱的纤维。

5.9.2.2 Sampling from a small bulk of raw or blended cotton 从小批量原棉或混棉中抽样，

If the bulk consists of less than 5 kg of loose raw cotton, it shall be spread out in an even layer. Unless otherwise stated, obtain the laboratory sample by selecting at random a minimum of a hundred tufts, each of 0,25 to 0,50 g.

如果批量由少于5公斤的松散原始棉花组成，应将其均匀铺开。除非另有说明，否则通过随机选择至少一百个纤维团，每个纤维团重0.25至0.50克来获得实验室样本。

If the bulk is greater than 5 kg, divide it into a number of equal portions, and take an equal number of tufts (of 0,25 to 0,50 g each) from each portion such that the total number from all portions exceeds a hundred.

如果批量超过5公斤，将其分成若干相等的部分，并从每个部分中取出相等数量的纤维团（每个纤维团重0.25至0.50克），以确保所有部分的总数超过一百个。

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5.9.2.3 Sampling from a pile of cotton bales 从棉包堆中抽样

5.9.2.3.1 General 概述

There is variation in most fibre properties between and within layers of the same bale of cotton. The values of coefficients of within- and between-layer variation and of the ratio of these coefficients of variation vary according to the fibre characteristics under consideration, and also with the type of cotton.

在同一包棉花的层与层之间以及层内，大多数纤维属性都存在变化。层内和层间变异系数的值以及这些变异系数比率的值根据所考虑的纤维特性不同而变化，也与棉花类型有关。

5.9.2.3.2 Procedure 程序

If the bale is open, a suitable laboratory sample may be obtained by selecting ten tufts at random throughout each of ten equally spaced layers.

如果棉包已打开，可以通过在十个相等间隔的层中每层随机选择十个纤维团来获得合适的实验室样本。

If the bale has not been opened, the above procedure cannot be followed. In this case, the following procedure may be feasible :

如果棉包尚未打开，就不能按照上述程序进行。在这种情况下，可能可以采用以下程序：

Extract the required number of tufts by removing cotton from one or more of the edges that are perpendicular to the layers in the bale, so that the sample includes material from many layers. In taking the tufts, reject any soiled cotton from the outside of the bale (the procedure may be facilitated by cutting one of the end bands round the bale).

通过从与棉包内层垂直的一个或多个边缘去除棉花来提取所需数量的纤维团，以便样本包含多个层的材料。在取纤维团时，要丢弃棉包外部的任何脏棉花（可以通过切割棉包一端的带子来方便这一程序）。

NOTE - A less satisfactory sample is yielded by selecting in some cases, samples prepared by hand are adequate. various places over the upper and lower sides of a bale. Taking tufts from

Although this cotton is easily accessible, any laboratory sample obtained in this manner will represent at the most two layers, one on each side of the bale.

注意 -

在某些情况下，通过从棉包的上侧和下侧的不同位置选择纤维团，可能会得到不太理想的样本。尽管这种棉花容易获取，但以这种方式获得的任何实验室样本最多只能代表两层，即棉包的每一侧一层。

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5.9.2.4 Ampling from a bulk consisting of several bales of cotton 从由多个棉包组成的大批量样品中抽样

5.9.2.4.1 General 概述

The detailed method of sampling depends on the type of test to be carried out, the number of -bales, and the likely variation between the bales.

抽样的详细方法取决于要进行的测试类型、棉包的数量以及棉包之间的可能变质。

5.9.2.4.2 Procedure 程序

The following procedure specification states otherwise shall be used unless the specification states otherwise.

除非说明书另有说明，否则应使用下列程序说明书。

5.9.2.4.3 When Bale Count Is Greater Than 10 当棉包数大于 10 时

WHEN THE BALE COUNT IS GREATER THAN 10 AND THE ACTUAL CHANGE IN MASS TEST RESULT IS NOT SIGNIFICANTLY LARGER THAN THE REQUIRED PRECISION:

当棉包数量大于10，且实际重量变化测试结果并未显著大于所需精度时：

Make a random choice of 10 % of the bales (or ten bales if 10 % of the bulk is less than ten bales); then from the selected bales take a minimum of a hundred tufts, taking an equal number of tufts from each layer of each bale.

随机选择10%的棉包（如果10%的数量不足10个，则选择10个棉包）；然后从选定的棉包中至少取100个纤维团，每个棉包的每层取相同数量的纤维团。

5.9.2.4.4 In Other Cases 其他情况

Select a minimum of a hundred tufts; take an equal number of tufts from each layer of each bale.

选择至少一百个纤维团；从每个棉包的每层中取相同数量的纤维团。

NOTE - For most commercial purposes, when selecting a commercial sample from a bale of cotton it is impracticable to obtain a representative sample by opening a bale and following the procedure described in 4.2 above. Samples prepared by selecting cotton from one or two layers in a bale are acceptable for many purposes of quality classification, and for some forms of testing (for example, determination of micronaire value) when past experience indicates that the feature under consideration varies appreciably more from bale to bale in a commercial lot than between layers in the same bale. Under such circumstances, it is recommended that a commercial sample be prepared in the form of two clumps of cotton, similar in surface area and mass, taken from opposite outer layers of the bale. The face of the sample should be not less than 120 mm X 150 mm and the total mass not less than 150 g. A sample consisting of a clump, of the same surface area and total mass, cut from one

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outer layer only, is less representative and will be deemed to fulfil the requirements of this International Standard only if mutually agreed by the parties concerned.

注意 - 对于大多数商业目的而言，从棉包中选取商业样本时，打开棉包并按照上述4.2节描述的程序进行是不切实际的。从棉包的一个或两个层中选取棉花制备的样本，对于许多质量分类目的以及某些形式的测试（例如，微米值的测定）是可接受的，前提是以往的经验表明，在商业批次中，所考虑的特征在棉包之间的变化比同一棉包内层与层之间的变化要大得多。在这种情况下，建议以两个棉花团的形式制备商业样本，这两个棉花团从棉包的相对外层抽样，表面积和质量相似。样本的面积不应小于120毫米×150毫米，总质量不少于150克。如果双方同意，仅从一个外层切割的棉花团组成的样本，如果表面积和总质量相同，代表性较差，但将被视为满足本国际标准的要求。

5.9.2.5 Preparation of laboratory test samples 实验室测试样品制备

In certain cases, it may be necessary to have a laboratory test sample prepared from the laboratory sample.

在某些情况下，可能需要从实验室样本中制备一个实验室测试样本。

These laboratory test samples should be prepared by a method which takes into consideration the test to be performed and the degree of accuracy desired.

这些实验室测试样本的制备方法应考虑到要进行的测试和所需的准确度。

In general, fibre blending by a mechanical blender is preferable, particularly when the test specimen is small in size, as is the case in the flat-bundle strength test. However, in some cases, samples prepared by hand are adequate. When the laboratory sample consists of tufts taken by cutting into the bales, cut fibres shall not be included in the laboratory test sample.

通常，使用机械混合器进行纤维混合是首选的，尤其是当测试样品尺寸较小时，如平束强度测试的情况。然而，在某些情况下，手工制备的样本是足够的。当实验室样本由切割棉包中取出的纤维团组成时，实验室测试样本不应包括切断的纤维。

5.9.2.5.1 Mechanical blending (preferred method) 机械混合（首选方法）

Mechanical mixing is designed to use a certain mass of fiber, for example, up to 10 g.

机械混合旨在使用一定质量的纤维，例如，最多10克。

Distribute the laboratory sample so that the germs can be taken from it at any point. Take a small pinch of fiber from at least 32 different evenly spaced points in the laboratory sample.

将实验室样本分布均匀，以便可以从任意点抽

样。从实验室样本中至少32个不同且间隔均匀的点取一小撮纤维。

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Perform a light draft action on the pinches before feeding into mechanical mixing, forming a smooth layer of fiber as much as possible. Mix the fibers using mixing to produce a practically homogeneous sample and take care not to damage the fibers.

在进行机械混合之前，对这些小撮纤维进行轻微的初稿操作，尽可能形成一层平滑的纤维。使用混合器混合纤维，以产生一个实际上均匀的样本，并注意不要损坏纤维。

5.9.2.5.2 Manual methods 手工方法

Different methods are defined in national standards. They are designed for different test methods, for example (t-squaring, making hand parts and making small samples for sequential halving and joining). In some cases, it is preferable to prepare test samples directly from the laboratory sample.

不同国家的标准中定义了不同的方法。这些方法为不同的测试方法而设计，例如（t型-分

割、制作手工零件和制作小样本进行连续对半分割和合并）。在某些情况下，最好直接从实验室样本中制备测试样本。

5.9.2.6 Sampling from a stack of processed material 从一堆加工材料中抽样

5.9.2.6.1 Lane 通道

If the cast consists of many cane or packages, each prepared and processed in the same way, obtain the laboratory sample accurately enough for most purposes by taking equal lengths from at least four kaneks or packages. If the number of possible or packets is less than four, get equal lengths from each.

如果一批材料由许多相同的杆或包裹组成，每个都以相同的方式准备和处理，那么可以通过从至少四个杆或包裹中取出等长的部分来获得对大多数测试目的来说足够准确的实验室样本。如果可用的杆或包裹数量不足四个，则从每个可用的杆或包裹中取等长的部分。

5.9.2.6.2 Threads 纱线

In testing yarn packets from a shipment, select four from different parts of the batch; if the batch consists of at least four packages, select them all.

在测试一批纱线包装时，从批次的不同部分选取四个；如果批次包含至少四个包装，则全部选取。

5.9.2.6.3 Fabric 织物

Select at least four threads for testing. Select warp threads approximately evenly along the width; usually in this way it will be appropriate to choose about sixteen. If possible, take scarves from different places along the cloth so that different policemen contain yarn.

选择至少四根经纱进行测试。大约均匀地沿着宽度选择经纱；通常这样选择大约十六根是合适的。如果可能，从布料的不同部位抽样，以便不同的经纱包含不同的纱线。

NOTE - As described in 5.8.2.6.2 and 5.8.2.6.3, a test sample or test sample can be prepared from selected packages or yarns, each bending of fibers of equal length, and care can be taken to exclude the fibers from the cut ends of the yarn lengths.

注意 -

如5.8.2.6.2和5.8.2.6.3中所述，可以从选定的包裹或纱线中准备测试样本或测试样品，每根纤维弯曲等长，并注意排除纱线长度切割端的纤维。

5.10 ISO 20921:2019 Textiles — Determination of stable nitrogen isotope ratio in cotton fibres 纺织品 棉纤维中稳定氮同位素比值的测定

Textile Exchange Organic Content Standard User Manual 3.1 (OCS-201-V3.1-OCS-User-Manual) C1. Under the Entry Material Verification section "C1.1 For organic cotton:" "ISO 20921: 2019 Textile - Determining the stable nitrogen isotope ratio in cotton fibers can be used to determine whether cotton is grown organically." It is called. This method can be used to determine whether the said product, subject to the standard, is grown using fertilizers. The standard method recommends its use for now, if needed.

纺织品交易所有机含量标准用户手册 3.1 (OCS-201-V3.1-OCS-User-Manual) C1. 在“C1.1 有机棉条目材料验证”部分：“ISO 20921: 2019 纺织品 - 确定棉纤维中稳定氮同位素比例可以用来判断棉花是否是有机种植的。”被称为。这种方法可以用来确定所说的产品，受标准管制，是否使用化肥种植。如果需要，目前推荐使用这种标准方法。

5.10.1 Introduction 简介

Nitrogen (N) is the most essential element for cotton fibre production, since cotton crops require large amounts of N to sustain their growth and productivity. For this purpose, considerable amounts of nitrogen are applied to the soil as chemical fertilizers (e.g. urea) or organic fertilizers (e.g. composted manure).

氮（N）是棉花纤维生产中最重要元素，因为棉花作物需要大量的氮来维持它们的生长和生产力。为此，大量的氮以化学肥料（例如尿素）或有机肥料（例如堆肥肥料）的形式施入土壤。

The nitrogen applied in the form of a chemical fertilizer or a composted manure is absorbed from the soil to cotton crops through their root systems during cultivation, leaving a fertilizer-specific nitrogen isotopic signature in cotton tissues (particularly in cotton fibres). The inerasable nitrogen isotopic fingerprint engraved in cotton fibres remains unchanged during manufacturing of yarns, textiles and fabrics.

以化学肥料或堆肥肥料形式施用的氮通过棉花作物的根系在栽培过程中从土壤中吸收，这在棉花组织中留下了特定肥料的氮同位素特征（特别是在棉纤维中）。在纱线、纺织品和织物的制造过程中，刻在棉纤维中的不可磨灭的氮同位素指纹保持不变。

This document employs the principle of nitrogen isotope discrimination that fractionates against ^{15}N (heavier nitrogen isotope), resulting in ^{15}N -enriched reactants and ^{15}N -

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depleted products. In general, composted manure has a much higher $\delta^{15}\text{N}$ (natural ^{15}N abundance, defined hereinafter) than chemical fertilizer due to faster NH_3 (ammonia) volatilization of the lighter nitrogen isotope (^{14}N) than ^{15}N during the composting process. In contrast, chemical fertilizers (e.g. urea) are produced from the atmospheric N_2 via the Haber-Bosch process, resulting in low $\delta^{15}\text{N}$ values close to atmospheric N_2 , which means that similar isotopic nitrogen compositions of chemical fertilizers to the atmospheric N_2 .

本文采用氮同位素鉴别原理，对 ^{15}N （较重的氮同位素）进行分馏，得到富含 ^{15}N 的反应物和贫化 ^{15}N 的产物。一般而言，堆肥后的粪肥具有比化学肥料高得多的 $\delta^{15}\text{N}$ （天然 ^{15}N 丰度，下文定义），这是因为在堆肥过程中，较轻的氮同位素（ ^{14}N ）比 ^{15}N 的 NH_3 （氨）挥发得更快。相比之下，化学肥料（例如尿素）是通过哈伯-博施法从大气中的 N_2 中生成的，因此其 $\delta^{15}\text{N}$ 值较低，接近大气中的 N_2 ，这意味着化学肥料的氮同位素组成与大气中的 N_2 相似。

Organic farming strictly bans the use of genetically modified crops (GMO), synthetic pesticides, and chemical fertilizers. Therefore, the use of chemical fertilizer during organic cotton production can be detected by determining $\delta^{15}\text{N}$ of cotton fibres, since the difference in $\delta^{15}\text{N}$ values between the two isotopically different nitrogen inputs (chemical vs. organic fertilizers) leaves a fertilizer-specific isotopic fingerprint in cotton fibres that can thereafter provide a forensic evidence for organic cotton fibre production.

有机农业严格禁止使用转基因作物（GMO）、合成农药和化学肥料。因此，可以通过测定棉纤维的 $\delta^{15}\text{N}$ 来检测有机棉生产过程中化学肥料的使用，因为两种同位素不同的氮输入（化学肥料与有机肥料）之间的 $\delta^{15}\text{N}$ 值差异在棉纤维中留下了特定肥料同位素指纹，此后可以为有机棉纤维生产提供法医证据。

5.10.2 Scope 范围

This document specifies the determination of the ratio of nitrogen isotopes in cotton fibres that are used for textile production. It applies not only to cotton textiles but also to raw cotton taken from cotton fields.

本文件规定了用于纺织品生产的棉纤维中氮同位素比例的测定。它不仅适用于棉纺织品，还适用于从棉田中获取的原始棉花。

5.10.3 Normative references 规范性引用

There are no normative references in this document.

本文件中没有规范性引用。

5.10.4 Terms and definitions 术语和定义

For the purposes of this document, the following terms and definitions apply.

对于本文件的目的，以下术语和定义适用。

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ISO and IEC maintain terminological databases for use in standardization at the following addresses:

ISO 和 IEC 在以下地址维护用于标准化的术语数据库:

- ISO Online browsing platform: available at <https://www.iso.org/obp>
- ISO 在线浏览平台: 可在 <https://www.iso.org/obp> 上获取
- IEC Electropedia: available at <http://www.electropedia.org/>
- IEC 国际电工委员会在线术语数据库: 可在 <http://www.electropedia.org/> 上获取

5.10.4.1 Stable isotope 稳定同位素

Stable isotope atom whose nucleus contains the same number of protons but a different number of neutrons

稳定同位素, 其核中含有相同数量的质子, 但中子数量不同。

Note 1 to entry: Stable isotopes do not decay into other elements, while radioactive isotopes are unstable and will decay into other elements.

注 1: 稳定同位素不会衰变为其他元素, 而放射性同位素不稳定, 会衰变为其他元素。

5.10.4.2 isotope-ratio mass spectrometry IRSM 同位素比值质谱法 IRSM

Specialization of mass spectrometry, in which mass spectrometric methods are used to measure the relative abundance of isotopes in given sample

质谱法的一种特殊形式, 其中使用质谱法测量给定样品中同位素的相对丰度。

Note 1 to entry: The analysis of isotopes is normally related to measuring isotopic variations caused by mass-dependent isotopic fractionation in natural systems.

注 1: 同位素的分析通常与测量自然系统中由质量依赖的同位素分馏引起的同位素变化有关。

5.10.4.3 isotopic fractionation isotopic discrimination 同位素分馏同位素鉴别

Process that affect the relative abundance of isotopes

影响同位素相对丰度的过程。

Note 1 to entry: Normally, the focus is on *stable isotopes* (3.1) of the same element. Isotopic fractionation in the natural environment can be measured by isotope analysis, using isotope-ratio mass spectrometry, to separate different element isotopes on the basis of their mass-to-charge ratios.

注 1: 通常, 关注的是同一元素的稳定同位素 (3.1)。自然环境中的同位素分馏可以通过同位素分析来测量, 使用同位素比质谱法, 根据它们的质荷比来分离不同元素的同位素。

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Note 2 to entry: Both heavy and light stable isotopes participate freely in biochemical reactions and in geochemical processes, but the rate at which heavy and light stable isotopes react differs. As a result, the lighter isotopes react faster than the heavier isotopes leading to isotopic fractionation between reactant and product in the reactions.

注 2: 重同位素和轻同位素均可自由参与生物化学反应和地球化学过程, 但重同位素和轻同位素的反应速率不同。因此, 较轻同位素的反应速度比较重同位素快, 导致反应中反应物和产物之间的同位素分馏。

5.10.4.4 Natural ¹⁵N abundance 天然¹⁵N丰度

Relative amount of the isotopes of nitrogen, as it occurs in nature

自然中氮同位素的相对含量

Note 1 to entry: Natural ¹⁵N abundance is expressed in parts per thousand (‰, per mil) deviations from the atmospheric N₂ (a standard).

注1: 自然¹⁵N丰度以千分之几 (‰, per mil) 表示, 与大气中N₂ (标准) 的偏差。

5.10.5 Principle 原理

Isotope-ratio mass spectrometry (IRMS) measures the relative abundance of stable isotopes (e.g. ¹⁴N and ¹⁵N for nitrogen) in a cotton fibre sample. The abundance of stable isotopes varies according to physical, physiological and biochemical isotopic fractionation processes. Consequently, variations in the isotopic ratio of nitrogen (i.e. ¹⁵N/¹⁴N) can be used both as fingerprints of the nitrogen source and to track the fate and transformation of nitrogen-containing compounds.

同位素比质谱法 (IRMS) 测量棉纤维样本中稳定同位素 (例如氮的¹⁴N和¹⁵N) 的相对丰度。稳定同位素的丰度根据物理、生理和生化同位素分馏过程而变化。因此, 氮的同位素比 (即¹⁵N/¹⁴N) 的变化既可以作为氮源的指纹, 也可以用来追踪含氮化合物的命运和转化。

Nitrogen (N) is the most essential element that can increase the production of cotton fibres that are used to manufacture cotton yarns, textiles and fabrics. To ensure cotton fibre production, sufficient amount of nitrogen should be supplied as fertilizers (chemical or organic fertilizers) to the soil to meet the nitrogen demand for the growth and productivity of cotton crops.

氮 (N) 是增加用于制造棉纱、纺织品和织物的棉纤维产量的最重要元素。为确保棉纤维生产, 应将足够量的氮作为肥料 (化学肥料或有机肥料) 施入土壤, 以满足棉花作物生长和生产力的氮需求。

Since most of fertilizer-nitrogen released into the soil is absorbed through root systems, translocated, and stored in the cotton fibres during cultivation, the isotopic nitrogen composition of the cotton fibre, expressed as δ¹⁵N, reflects the type of fertilizer from which it originated. In general, δ¹⁵N of chemical fertilizers is close to 0 ‰, ranging from -3,9 ‰ to +0,5 ‰, while that of composted manure is much higher, ranging between +15,4 ‰ and +19,4 ‰. Cotton fibres harvested are processed to produce cotton yarns, textiles, and

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fabrics. Therefore, it is believed that $\delta^{15}\text{N}$ of a cotton fibre that contains information about the type of nitrogen fertilizers can serve as an isotopic fingerprint to identify authenticity and trace origin of cotton products, such as yarns, textiles and fabrics.

由于释放到土壤中的大部分肥料氮通过根系吸收、转运，并在栽培过程中储存在棉纤维中，棉纤维的同位素氮组成，以 $\delta^{15}\text{N}$ 表示，反映了其来源的肥料类型。一般来说，化学肥料的 $\delta^{15}\text{N}$ 接近0‰，范围在-

3.9‰到+0.5‰之间，而堆肥肥料的 $\delta^{15}\text{N}$ 则高得多，范围在+15.4‰到+19.4‰之间。收获的棉纤维被加工成棉纱、纺织品和织物。因此，含有关于氮肥类型的信息的棉纤维的 $\delta^{15}\text{N}$ 可以作为同位素指纹，用于识别棉产品的真伪和追踪其来源，如纱线、纺织品和织物。

An accurate measurement of $\delta^{15}\text{N}$ of an aliquot of the dried cotton fibres can be obtained by using a continuous-flow type isotope ratio mass spectrometer linked to an elemental analyser (EA-IRMS). An aliquot of the test sample is washed, dried, ground to very fine powders using a ball-mill, weighed in a tin capsule on a microbalance, and then analysed for cotton- $\delta^{15}\text{N}$.

通过使用连续流动式同位素比质谱仪（EA-IRMS）与元素分析仪相连，可以获得干燥棉纤维样品 $\delta^{15}\text{N}$ 的准确测量值。测试样品的一小部分被洗涤、干燥、用球磨机磨成非常细的粉末，称重后放入锡胶囊中，并进行棉 $\delta^{15}\text{N}$ 分析。

In particular, the use of chemical fertilizers can be attested by simultaneous measurements of stable nitrogen isotope ratio ($\delta^{15}\text{N}$) of cotton fibre and soil samples at harvest by using the determination process specified herein, and the determination procedure is specified in [Annex A](#). [Annex B](#) shows some main outcomes of feasibility testing performed on cotton fabrics from organic certified textiles (see [Table B.1](#)) and raw cotton fibres obtained from several countries (see [Table B.2](#)).

特别是，可以通过使用本文件指定的测定过程，同时测量收获时棉纤维和土壤样本的稳定氮同位素比（ $\delta^{15}\text{N}$ ），来证明化学肥料的使用，测定程序在附录A中指定。附录B显示了对有机认证纺织品（见表B.1）和来自几个国家的原始棉纤维（见表B.2）进行的可行性测试的一些主要结果。

5.10.6 Reagent 试剂

5.10.6.1 Reference material, nitrogen isotopes in ammonium sulfate (IAEA-N2) 参考材料，硫酸铵中的氮同位素（IAEA-N2）

Provided by the International Atomic Energy Agency (IAEA), necessary to check the accuracy and precision of $\delta^{15}\text{N}$ analysis, and available as NIST RM8548.

由国际原子能机构（IAEA）提供，用于检查 $\delta^{15}\text{N}$ 分析的准确性和精确度，可用作NIST RM8548。

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The $\delta^{15}\text{N}$ of NIST RM8548 is +20,3 ‰, and the accuracy and reproducibility of $\delta^{15}\text{N}$ analysis checked periodically with this standard should be lower than 0,4 ‰ and 0,2 ‰, respectively.

NIST

RM8548的 $\delta^{15}\text{N}$ 值为+20.3‰，使用此标准定期检查的 $\delta^{15}\text{N}$ 分析的准确性和可重复性应分别低于0.4‰和0.2‰。

5.10.7 Apparatus 仪器

a) Drying oven 干燥炉,

Drying oven, capable of heating up to around 80 °C.

干燥炉，能够加热至80°C左右。

b) Ball-mill 球磨机,

Ball-mill capable of grinding to final size smaller than 5 μm , and vibrational frequency ranging 3 Hz to 30 Hz (180 ~ 1 800) r/min are at least required.

要求球磨机的振动频率至少为3hz ~ 30hz (180 ~ 1800) r/min，能磨出小于5 μm 的最终粒度。

c) Microbalance 微量天平,

Microbalance, with readability of 1 μg .

微量天平，精确至 1 微克。

d) Continuous-flow elemental analyser-isotope ratio mass spectrometer (EA-IRMS) 连续流元素分析仪-同位素比值质谱仪 (EA-IRMS) .

5.10.8 Preparation 准备

5.10.8.1 Sampling of test specimen 试样抽样

Cotton fibre samples are taken from fabricated textiles and prepared as test specimens.

棉纤维样品取自成品纺织品，并作为试验样品制备。

5.10.8.2 Pre-treatment of test specimen 试样预处理

Cotton fibre samples are immersed with 100 ml distilled waters for 3 min and oven-dried at 80 °C for 24 h. Dried samples are chopped, homogeneously ground into a very fine powder using a ball-mill and used in triplicate for ^{15}N analysis.

棉纤维样品在 100 毫升蒸馏水中浸泡 3 分钟，在 80° C 下烘干 24 小时。干燥后的样品切碎，用球磨机均匀地磨成非常细的粉末，一式三份用于 ^{15}N 分析。

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5.10.9 Test procedure 测试程序

5.10.9.1 Weighing of aliquot 等分试样称重

5.10.9.1.1 Determination of weighing amount needed 确定所需称重量

Each finely ground test specimen is weighed with a tin capsule (or can) using a microbalance (readability: at least 1 µg).

每个精细研磨的试样都使用锡胶囊（或罐）通过微量天平（读数精度：至少 1 微克）进行称重。

Provide between (100 ~1 200) µg of nitrogen for each aliquot of the test specimen to meet EA-IRMS detection limits.

为每个试样的等分提供（100 至 1200）微克的氮气，以满足 EA-IRMS 检测限。

However, the minimum amount needed for accurate and precise analysis of δ¹⁵N is typically about 100 µg of nitrogen.

然而，通常需要的最小量以准确和精确地分析 δ¹⁵N 大约是 100 微克的氮气。

A simple formula to determine the amount of an aliquot to weigh for the EA-IRMS measurements is given as [Formula \(1\)](#):

确定 EA-IRMS 测量所需称重的等分量的简单公式如公式（1）所示：

$$m_a = \frac{m_N}{1000} * \frac{100}{w_p} \quad (1)$$

$$m_a = 1000 w_p$$

where 如下

m_a is the dry mass of an aliquot needed for EA-IRMS measurements (mg);

m_N is the dry mass of nitrogen needed (µg);

w_p is the mass fraction percentage of nitrogen in the test specimen (%).

m_a 是需要进行 EA-IRMS 测量的等分的干质量（毫克）；

m_N 是所需氮的干质量（微克）；

w_p 是试样中氮的质量分数百分比（%）。

For example, if the test specimen has 1 % nitrogen and 100 µg of nitrogen for the IRMS measurements is provided, then an aliquot that weighs 10 mg shall be prepared.

例如，如果试样含有 1% 的氮，并且为 IRMS 测量提供了 100 微克的氮，那么应该准备一个重量为 10 毫克的等分。

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For samples with unknown % nitrogen, it is recommended to determine the % nitrogen of the test specimen before making isotope analysis.

对于氮含量未知的样品，在进行同位素分析之前，建议先确定试样的氮含量百分比。

In general, the optimal mass of an aliquot for the IRMS measurements is 33 mg to 56 mg for cotton products (cotton fibres in yarns or textiles), since cotton products typically contain between 0,18 and 0,30) % nitrogen.

通常，对于棉产品（棉纱或纺织品中的棉纤维），IRMS 测量的最佳等分质量是 33 毫克到 56 毫克，因为棉产品通常含有 0.18%到 0.30%的氮。

5.10.9.1.2 General weighing procedure 一般称重程序

- a) Clean the plate and tools using lint-free papers or equivalents moistened with alcohol or acetone.
使用无绒纸或等效物，用酒精或丙酮湿润后清洁平板和工具。
- b) Clean the microbalance with a brush.
用刷子清洁微量天平。
- c) Turn on the microbalance and wait for the microbalance to stabilize.
打开微量天平，等待其稳定。
- d) Use the tweezers to grab an empty tin capsule by the edge and place on top of the balance.
用镊子夹住空锡胶囊的边缘，然后放在天平上。
- e) Push the "TARE" button to re-zero the mass.
按下“去皮”按钮重新归零质量。
- f) Carefully scoop out a small aliquot of test specimen into the tin capsule by adding in small increments.
仔细地将一小份试样逐步加入锡胶囊中。
- g) Remove the tin capsule from the microbalance.
从微量天平上取下锡胶囊。
- h) Fold the tin capsules several times into a small cube or sphere with the tweezers to make sure the openings are closed.
用镊子将锡胶囊多次折叠成一个小立方体或球体，确保开口封闭。
- i) Place the cube into your sample tray such as 96-well tray for delivery or shipping.
将小立方体放入样品托盘中，例如 96 孔托盘，以便运送或邮寄。
- j) Clean the spatula between each weighing to avoid contamination.
每次称重后清洁刮刀，以避免污染。

When finished, clean the microbalance and tools before turning off the microbalance.
完成后，在关闭微量天平之前清洁天平和工具。

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5.10.9.2 Natural 15N abundance analysis 天然15N丰度分析

5.10.9.2.1 Instrumentation 仪器仪表

Continuous-type EA-IRMS is used for the determination of 15N in a gas sample that is introduced into IRMS through the elemental analyser (EA). The EA-IRMS is equipped with an ion-source for ionizing the incoming sample gases, a permanent magnet and an electromagnet for steering the ions, and the Faraday cups collecting N₂ gas travelling with the different mass-to-charge ratios.

The isotopic nitrogen composition of the sample gas is compared to that of standard gas (atmospheric N₂) during each sample run, and the resulting sample's $\delta^{15}\text{N}$ value is calculated using [Formula \(1\)](#).

连续型 EA-IRMS 用于测定通过元素分析仪 (EA) 引入 IRMS 的气体样品中的 15N。EA-IRMS 配备了一个用于电离进入的样品气体的离子源, 一个用于引导离子的永久磁铁和电磁铁, 以及收集具有不同质荷比的 N₂ 气体的法拉第杯。在每次样品运行过程中, 将样品气体的氮同位素组成与标准气体 (大气 N₂) 进行比较, 并使用公式 (1) 计算出样品的 $\delta^{15}\text{N}$ 值。

5.10.9.2.2 General analytical procedure 分析程序概述

- a) Place packed tin capsules continuously into a carousel (auto-sampler unit) for automatic analysis.
将装有样品的锡胶囊连续放入旋转盘 (自动进样器单元) 进行自动分析。
- b) Drop packed tin capsules sequentially into the oxidation reactor (980 approximately 1080) °C and then combust them with excess O₂ to complete oxidation.
将装有样品的锡胶囊依次放入氧化反应器 (大约 980 至 1080° C) 中, 然后用过量的 O₂ 燃烧它们以完成完全氧化。
- c) Perform EA-IRMS measurements and check the isotopic nitrogen composition of gas relative to that of the standard gas (atmospheric N₂) from a compressed cylinder with known or predetermined isotope ratio at every measurement.
进行 EA-IRMS 测量, 并在每次测量时, 检查气体相对于标准气体 (大气中的 N₂) 的氮同位素组成, 标准气体来自已知或预先确定同位素比率的压缩气瓶。
- d) During each run, check the precision of isotope analysis with an internationally accepted reference material.
在每次运行期间, 使用国际公认的参考材料检查同位素分析的精度。
- e) Calculate and report the final isotopic value ($\delta^{15}\text{N}$) relative to that of atmospheric N₂.
计算并报告最终的同位素值 ($\delta^{15}\text{N}$), 相对于大气中 N₂。

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Natural ¹⁵N abundance of a given sample is expressed in parts per thousand (‰, per mil) deviations from the atmospheric N₂ (a standard), and this precisely small difference in the abundance of isotopes can be measured by using isotope-ratio mass spectrometers. The deviation in natural ¹⁵N abundance of a sample from that of the standard (atmospheric N₂) is referred to as δ¹⁵N which is defined as the following [Formula \(2\)](#):

给定样品的自然 ¹⁵N 丰度以千分之几 (‰, 每千) 表示, 与大气 N₂ (标准) 的偏差, 这种精确的小的同位素丰度差异可以通过使用同位素比质谱仪来测量。样品的自然 ¹⁵N 丰度与标准 (大气 N₂) 的偏差称为 δ ¹⁵N, 定义如下公式 (2) :

$$Na = \left[\frac{Rsa}{Rst} - 1 \right] * 1000 \quad (2)$$

where

- Na* is δ¹⁵N (‰);
- Rsa* is the ratio of sample;
是样品比;
- Rst* is the ratio of standard.
是标准的比值

where the ratio is the isotopic ratio of the heavier isotope (¹⁵N) to lighter isotope (¹⁴N). Atmospheric N₂ having the ratio of 0,366 3 atom % ¹⁵N is chosen as the standard for this ¹⁵N analysis of samples.

其中, 比率是指较重同位素 (¹⁵N) 与较轻同位素 (¹⁴N) 的同位素比率。大气 N₂, 其比率为 0.3663 原子%的 ¹⁵N, 被选为这些样品 ¹⁵N 分析的标准。

5.10.10 Precision 精密度

The accuracy and reproducibility of the analytical procedure can be checked by reference materials.

分析过程的准确性和可重复性可以通过参考材料进行检查。

5.10.11 Test report 测试报告

The test report shall at least include the following items:

测试报告至少应包括以下项目:

- a) a reference to this document, i.e. ISO 20921:2019;
对本文件的引用, 即 ISO 20921:2019;
- b) sample number;
样品编号;

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c) cotton- $\delta^{15}\text{N}$ and nitrogen content;
棉- $\delta^{15}\text{N}$ 和氮含量;

mean and standard deviation of the reference material.
参考材料的平均值和标准偏差。

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Annex A 附录 A

Identification procedure of organic raw cotton fibres by using stable nitrogen isotope ratios (normative)

利用稳定的氮同位素比值鉴别有机原棉纤维的程序（规范性）

A.1 General 概述

Natural ^{15}N abundance ($\delta^{15}\text{N}$) of chemical fertilizers is close to 0 ‰, ranging from -3,9 ‰ to +0,5 ‰, while composted manure has much higher $\delta^{15}\text{N}$ than chemical fertilizers, ranging between +15,4 ‰ and +19,4 ‰.

化肥中自然 ^{15}N 的丰度 ($\delta^{15}\text{N}$) 接近 0‰，范围在-3.9‰到+0.5‰之间，而堆肥的 $\delta^{15}\text{N}$ 比化肥高得多，范围在+15.4‰到+19.4‰之间。

Therefore, the addition of composted manure increases cotton- $\delta^{15}\text{N}$ compared with soil- $\delta^{15}\text{N}$ at harvest, while that of chemical fertilizer lowers cotton- $\delta^{15}\text{N}$. This contrasting pattern of cotton- $\delta^{15}\text{N}$ versus soil- $\delta^{15}\text{N}$ makes it possible to use $\delta^{15}\text{N}$ signal stored in cotton fibres as a potential marker for identifying organic cotton fibres from their conventionally grown counterparts. Consequently, this nitrogen isotopic fingerprinting can provide a forensic evidence in tracing cotton products from the origins (cotton fibres) to processing of cotton yarn, textile and fabrics.

因此，施用堆肥会使收获时的棉- $\delta^{15}\text{N}$ 相对于土壤- $\delta^{15}\text{N}$ 增加，而施用化肥则会降低棉- $\delta^{15}\text{N}$ 。这种棉- $\delta^{15}\text{N}$ 与土壤- $\delta^{15}\text{N}$ 的对比模式使得可以使用储存在棉纤维中的 $\delta^{15}\text{N}$ 信号作为识别有机棉纤维与其常规种植对应物的潜在标记。因此，这种氮同位素指纹可以提供从源头（棉纤维）到棉纱、纺织品和织物加工过程中追踪棉产品的法医证据。

A.2 Preparation 准备

A.2.1 Sampling of test specimen 试样抽样

Follow the general procedures and protocols for cotton fibres and soil sampling in principle. 原则上遵循棉纤维和土壤抽样的一般程序和规程。

A.2.2 Cotton fibres 棉纤维

Sampling of cotton fibres (test specimen 1) is made at harvest from each cotton field before further shipping and processing. At least two cotton crop (cotton fibre) samples are randomly collected in 1 000 m².

在进一步运输和加工之前，从每个棉田收获时采集棉纤维（试样 1）。至少在 1000 平方米内随机收集两个棉花作物（棉纤维）样品。

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A.2.3 Soil 土壤

Sampling of soil (test specimen 2) at harvest time is mandatory particularly at the early identification of cotton fibres; otherwise, can be omitted. In each cotton field, at least two composite soil samples were randomly collected in 1 000 m². Each composite soil sample was made using five sub-samples taken individually from five root zones (10 cm approximately 30 cm) around each representative crop chosen. Sample size could vary depending on soil heterogeneity, crop history, fertilization history, and so forth.

在收获时对土壤（试样 2）进行采样是强制性的，尤其是在早期识别棉纤维时；否则，可以省略。在每个棉田中，至少随机收集两个复合土壤样品，面积为 1000 平方米。每个复合土壤样品是通过从每个选定的代表性作物周围的五个根区（大约 10 厘米至 30 厘米）单独采集的五个子样品制成的。样品大小可能会因土壤异质性、作物历史、施肥历史等因素而有所不同。

A.2.4 Pre-treatment of test specimen 试样的预处理

A.2.4.1 Cotton fibres 棉纤维

Cotton fibre samples are immersed with 100 ml distilled waters for 3 min and oven-dried at 80 °C for 24 h. Dried samples are chopped homogeneously ground into a very fine powder using a ball-mill.

棉纤维样品用 100 毫升蒸馏水浸泡 3 分钟，在 80° C 下烘干 24 小时。干燥后的样品用球磨机切碎，均匀地磨成非常细的粉末。

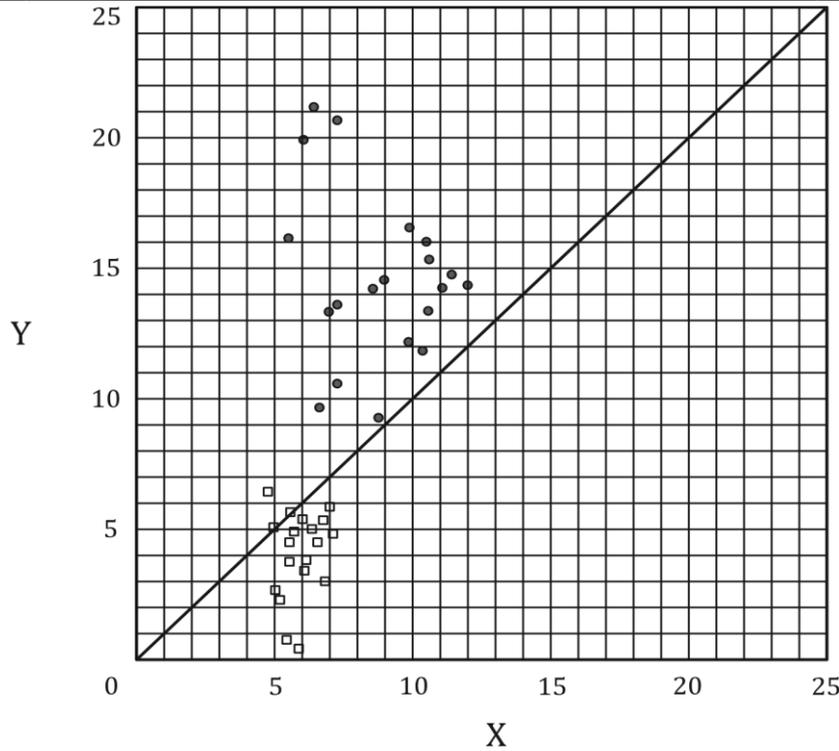
A.2.4.2 Soil 土壤

Soil (test specimen 2) samples are oven-dried at 105 °C for 24 h, passed through a 2 mm sieve before grinding. Dried samples are homogeneously ground into a very fine powder using a ball-mill.

土壤(试样 2)试样在 105 °C 下烘干 24 h，通过 2mm 筛后研磨。干燥的样品用球磨机均匀地磨成非常细的粉末。

A.3 Comparison between cotton and soil results 棉花和土壤结果的比较

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Key

X $\delta^{15}\text{N}$ of total soil-N (‰) 土壤总氮的 $\delta^{15}\text{N}$ 值 (‰)

Y $\delta^{15}\text{N}$ of total plant-N (‰) 植物总氮的 $\delta^{15}\text{N}$ 值 (‰)

compost-applied 施用堆肥

•fertilizer-applied 施用化肥

Figure A.1 — Cross-plot of $\delta^{15}\text{N}$ values of total soil-N versus $\delta^{15}\text{N}$ values of total plant-N from fertilizer-applied and compost-applied upland fields

图 A.1 —— 施用化肥和施用堆肥的旱地田地中土壤总氮的 $\delta^{15}\text{N}$ 值与植物总氮的 $\delta^{15}\text{N}$ 值的交叉图

Figure A.1 shows that plants grown in compost-applied fields were enriched in ^{15}N , while those grown in fertilizer-applied fields were depleted relative to soils. The 1:1 line of plant- $\delta^{15}\text{N}$ versus soil- $\delta^{15}\text{N}$ is indicated. In summary, the application of compost resulted in a significant ^{15}N enrichment of total soil-N and total plant-N relative to fertilizer amendment.

图 A.1 显示，在施用堆肥的田地中生长的植物富含 ^{15}N ，而在施用化肥的田地中生长的植物相对于土壤而言 ^{15}N 含量较低。图中标示了植物 $\delta^{15}\text{N}$ 与土壤 $\delta^{15}\text{N}$ 的 1:1 线。总之，施用堆肥相对于化肥改良，显著增加了土壤总氮和植物总氮的 ^{15}N 富集。

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Annex B 附录 B

Analytical results of cotton fibres of various origin and process stage (informative)

不同来源和加工阶段的棉纤维分析结果（资料性）

B.1 Example of test results for cotton fabrics from organic certified textiles

B.1 有机认证纺织品棉织物的测试结果示例

Table B.1 — Nitrogen content and its natural abundance ($\delta^{15}N$) of white and coloured cotton fabrics of organic certified textiles

B.1 —— 有机认证纺织品的白色和彩色棉织物的氮含量及其自然丰度 ($\delta^{15}N$)

Sample 样品	Sampling part 样品部位	N content 氮含量 g/kg	$\delta^{15}N$ ‰
	white 白色	2,17	+1,79
	violet 紫罗兰色	2,56	+2,01
	white 白色	2,77	-3,74
	sky blue 天蓝色	1,28	-4,01
	white 白色	3,13	-2,38
	navy blue 深蓝色	1,26	-2,34

Table B.1 shows the results of a test analysis of cotton fabric samples taken from commercially available infant garments. The garments used as samples were certified organic cotton, and the cotton fibres used were subjected to a general dyeing process. The result shows that nitrogen content and natural ^{15}N abundance ($\delta^{15}N$) contained in cotton fibres can be measured even if they are used in manufacturing textile products.

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表 B.1 显示了从市场上可获得的婴儿服装中抽样的棉织物样品的测试分析结果。作为样品使用的服装是经过认证的有机棉，所使用的棉纤维经过了一般的染色过程。结果表明，即使在制造纺织品时使用，也可以测量棉纤维中所含的氮含量和自然 $\delta^{15}\text{N}$ 丰度（ $\delta^{15}\text{N}$ ）。

On the other hand, the result of the test analysis shows that the isotopic nitrogen composition is out of its isotope level for organic produce. Therefore, this test method can provide an opportunity to reaffirm the applicability of organic cotton fibres included in textile products.

另一方面，测试分析的结果表明，同位素氮组成超出了有机产品的同位素水平。因此，这种测试方法可以提供一个机会，重新确认纺织品中包含的有机棉纤维的适用性。

B.2 Example of test results for raw cotton fibres B.2 原棉纤维的测试结果示例

Table B.2 — Nitrogen content and its natural abundance ($\delta^{15}\text{N}$) of raw cotton fibres obtained from three countries

表 B.2 —— 来自三个国家的原棉纤维的氮含量及其自然丰度（ $\delta^{15}\text{N}$ ）

Process stage 处理阶段	Country of origin 原产国	N content 氮 含量 g/kg	$\delta^{15}\text{N}$ ‰
Raw cotton fibre 原棉纤维	Korea 韩国	2,85	+7,05
Raw cotton fibre 原棉纤维	Korea 韩国	2,63	+2,05
Raw cotton fibre 原棉纤维	Turkey 土耳其	2,73	+4,80
Raw cotton fibre 原棉纤维	Turkey 土耳其	2,35	+7,25
Raw cotton fibre 原棉纤维	Azerbaijan 阿塞拜疆	2,67	+8,26

Table B.2 shows the results of a test analysis of raw cotton fibre samples taken from three countries. The result shows that nitrogen content and natural $\delta^{15}\text{N}$ abundance ($\delta^{15}\text{N}$), contained in raw cotton fibres, can be measured whatever their country of origin may be. 表 B.2 显示了从三个国家抽样的原棉纤维样品的测试分析结果。结果表明，无论原产国如何，都可以测量原棉纤维中所含的氮含量和自然 $\delta^{15}\text{N}$ 丰度（ $\delta^{15}\text{N}$ ）。

On the other hand, the result of the test analysis shows that the isotopic nitrogen composition of raw cotton fibres is different depending on the type of fertilizer (composted

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manure or chemical fertilizer. Therefore, this test method can provide an opportunity for the detection of the use of chemical fertilizers in the production of raw organic cotton fibres. 另一方面，测试分析的结果表明，原棉纤维的同位素氮组成因化肥类型（堆肥或化学肥料）而异。因此，这种测试方法可以为检测有机原棉纤维生产中化学肥料的使用提供机会。

5.11 Principles of Sampling from Animal Products 动物产品采样原则

As stated in TC Organic Md.36 (ç-e), ETKO;

如TC Organic Md.36 (ç-e)中所述，艾拓克；

- It takes samples for analysis purposes for the determination of the use of products that are not allowed for organic production, the determination of organic production rules and unsuitable production techniques, and the detection of possible contamination with products that are not permitted for organic production. The annual number of samples taken for analysis purposes meets at least 5% of the number of entrepreneurs under the control of the authorized organization. The choice of where to take samples is based on the general assessment of the risk that all stages of organic farming activity are not in compliance with organic production rules. This general assessment; production, preparation and distribution are carried out taking into account all stages.

它为分析目的抽

样，以确定未使用有机生产允许的产品、确定有机生产规则和不适宜的生产技术，以及检测可能与有机生产不允许的产品污染。为分析目的抽样的年度数量至少达到授权组织控制的企业家数量的5%。抽样地点的选择基于对有机农业活动所有阶段不遵守有机生产规则的一般风险评估。这种一般评估；生产、准备和分销是考虑到所有阶段进行的。

- It takes and analyzes the desired number of samples in case of suspected use of techniques or products that are not suitable for organic production. 如果怀疑使用了不适宜有机生产的技术或产品，则抽样并分析所需数量的样品。
- It analyzes product samples in approved laboratories accredited according to TS EN ISO/IEC 17025 standard and approved by ETKO and included in the "GP06 F02 CERTIFIED SUBCONTRACTOR LIST". 在根据TS EN ISO/IEC 17025标准认可并由ETKO批准并列入"GP06 F02认证分包商名单"的批准实验室中分析产品样品。
- The sample taken by the ETKO controller is recorded in the "OP03 F01 Sampling Form". ETKO监管员抽样记录在"OP03 F01采样表"中。
- From animal products 来自动物产品

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TABLE-4表4

Eggs and Everyday Products: Minimum Size of Laboratory Samples and Description of Primary Samples

鸡蛋和日常产品：实验室样品的最小尺寸和原始样品的描述

	Product Classification 产品分类	Examples 样品	Type of Primary Sample to Be Taken 应取的原始样品类型	Minimum Size of Laboratory Samples 实验室样品的最小尺寸
Primary Food Products of Animal Origin 动物源性初级食品				
1	Winged Eggs 家禽鸡蛋			
1	Eggs Except Quail, etc. 鸡蛋（除鹌鹑蛋等）		Whole Egg 整蛋	12 whole chicken eggs, 6 goose or duck eggs 12个完整的鸡蛋，6个鹅蛋或鸭蛋
1	Quail, etc. Eggs 鹌鹑蛋等		Whole Egg 整蛋	24 Whole Eggs 24个完整鸡蛋
2	milk 牛奶		All units or units received with a sampling device 所有单位或用采样装置接收的单位	0.5L 0.5升
Processed Food Products of Animal Origin 动物源性加工食品				
3	Secondary food products of animal origin, non-skimmed milk, darkened milk and secondary dairy products of animal origin, such as milk powder. 动物源性次级食品，非脱脂牛奶，变稠牛奶和动物源性次级乳制品，如奶粉。 Edible products of animal origin, dairy products such as milk fat, butter, cream,			

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	whipped cream, casein, etc. 动物源性食品，乳制品如牛奶脂肪、黄油、奶油、搅打奶油、酪蛋白等。 Processed food of animal origin (single additive), dairy products such as yogurt, cheese 动物源性加工食品（单一添加剂），乳制品如酸奶、奶酪 Processed food of animal origin (multi-additive), cheese products, cheese preparations, condiment yogurt, sugary condensed milk such as produced dairy products (including products containing plant-derived substances dominated by animal origin content (s)) 动物源性加工食品（多种添加剂），奶酪产品、奶酪准备、调味酸奶、含糖炼乳等 动物源性食品（包括以动物源性含量为主的植物源性物质的产品）		
3 . 1 .	Liquid dairy products, milk powder, darkened milk and cream, daily ice cream, cream, yogurt 液态乳制品、奶粉、变稠牛奶和奶油、每日冰淇淋、奶油、酸奶		Packaged unit (s) or unit (s) received with a sampling device 包装单位（s）或用采样装置接收的单位（s） 0,5 l (liquid) or 0,5 kg (solid) 0.5升（液态）或0.5公斤（固态）
3 . 2 .	Butter and cream 黄油和奶油	Butter, whey butter, fat-reduced butter, thirsty butter oil, thirsty milk fat 黄油、乳清黄油、低脂黄油、干酪油、脱脂乳脂	All or part of the packaged volumes or units taken with a sampling device 所有或部分包装体积或用采样装置取的单位 0,2 kg or 0,2 l 0.2公斤 或 0.2升
3 . 3 .	Cheeses, including processed cheeses 奶酪，包括加工奶酪		
	Units of 0.3 kg or larger 0.3公斤或更大的单位		All units (s) or units (s) truncated with a sampling device 所有单位（s）或用采样装置截断的单位（s） 0.5kg 千克
	Units smaller than 0.3 kg		0.3kg 千克
3 . 4 .	Liquid, frozen and dried egg products 液态、冷冻和干燥蛋制品		Aseptic unit (s) with a sampling device 无菌单位（s）用 0.5kg 千克

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		采样装置	
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6. SAMPLING CRITERIA 采样标准

The number, quantity, timing and method of the samples have a direct impact on the results of the analyses, so they should be considered as critical parameters for risk assessment. The packaging material used to send samples to the laboratory is an integral part of the good sampling application, as transportation and time are required. 889.92e.c.ii

样品的数量、数量、时机和方法对分析结果有直接影响，因此它们应被视为风险评估的关键参数。用于将样品发送到实验室的包装材料是良好采样应用的一个组成部分，因为需要运输和时间。889.92e.c.ii

1- Samples must be taken during inspections according to the following procedures:

1- 必须按照以下程序在检查期间抽样：

2- The certification process can start after the evaluation of the analysis reports.

2- 在分析报告评估之后，认证过程可以开始。

3- Samples should be analyzed in an accredited laboratory according to ISO 17025.

3- 样品应在认可的实验室中按照ISO 17025进行分析。

4- The price of the analyses should be taken into account.

4- 应考虑分析的价格。

5- Analysis reports should be evaluated by authorized personnel at ETKO.

5- 分析报告应由ETKO的授权人员评估。

6- Samples must be taken appropriately and represent all parties.

6- 样品必须适当抽样，并代表所有方面。

7- Suitable packaging material such as polyethylene, cloth bags, cardboard boxes, etc. should be used for sampling. Recycled packaging materials should be preferred.

7-

采样应使用合适的包装材料，如聚乙烯、布袋、纸板箱等。应优先使用回收的包装材料。

8- Use suitable sampling equipment for sampling, especially for pulses and cereals.

8- 对于豆类和谷物等，应使用合适的采样设备进行采样。

9- Samples must be tightly packed, sealed and labeled.

9- 样品必须紧密包装、密封并贴标签。

10- Prepare a sampling form and answer all the necessary questions.

10- 准备采样表并回答所有必要的问题。

11- Deliver to the laboratory using a suitable transport vehicle with the sampling form.

11- 使用合适的运输工具将样品连同采样表一起送至实验室。

12- When we receive the Sonyucs, we must communicate them to the customer.

12- 当我们收到样品时，必须通知客户。

13-Follow the following sampling criteria:

13- 遵循以下采样标准：

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No 序号	Product 产品	Instantiation 抽样示例
1	Pulses and cereals: 豆类和谷物:	A sample of dried seeds should be taken after harvesting. 在收获后取干燥种子样品。
2	Herbs and spices: 草药和香料:	After the first or after the last operation 在第一次或最后一次操作后。
3	Dried fruits and vegetables: 干果和干菜:	After the first trade or after the last trade (before export) 在首次交易后或最后一次交易后（出口前）。
4	Fresh fruits and vegetables: 新鲜水果和蔬菜:	During the production period, immediately before harvest and/or before exporting sonar from packaging 在生产期间，收获前和/或包装前立即。
5	Canned fruits and vegetables: 罐装水果和蔬菜:	During the growth season or before export after final processing 在生长期或最终加工后出口前。
6	Frozen products: 冷冻产品:	During the growth season or before exporting after processing 在生长期或加工后出口前。
7	Honey and other beehive products: 蜂蜜和其他蜂巢产品:	After harvesting or before final packaging 在收获后或最终包装前。
8	Drinks: 饮料:	Before the last packing 在最后一次包装前。
9	Everyday products: 日常产品:	After the last processing 在最后一次加工后。
10	Sea fruits: 海产品:	After the last processing 在最后一次加工后。
11	Textile products: 纺织品:	After painting and washing of garment end products, before thread processing, before fabric processing 在服装最终产品涂漆和洗涤后，纱线加工前，织物加工前。
12	Fertilizers; 肥料:	During or after processes such as composting for packaged mineral fertilizers. 在堆肥等过程期间或之后，对于包装的矿物肥料。

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13	Natural collection products; 自然采集产品：	No sampling required from raw materials, processed and packaged products can be sent for analysis 不需要从原材料抽样，已加工和包装的产品可以送去分析。
14	Leather products; 皮革产品：	After the last processing 在最后一次加工后。
15	Essential oil and other cosmetic products; 精油和其他化妆品：	After the last processing 在最后一次加工后。

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APPENDIX – 1

附录-1

MINIMUM WEIGHTS AND MINIMUM SAMPLE WEIGHTS OF SEED PARTIES THAT WILL BE BASED ON SAMPLING

基于种子方最低重量和最小样品重量的抽样

GROUP NAME INCLUDING THE END OF THE SKIN 组名	THE PLANT WHERE SEED IS A 包含的种子种类	THE MINIMUM WEIGHT OF THE SEED PARTY (KG) 种子方的最低重量 (千克)	SEED PARTY'S MINIMUM SAMPLE WEIGHT (GR) 种子方的最小样本重量 (克)
SERIES CLIMATE BOND. 系列气候组成	Wheat, Barley, Oats, Rye, Triticale 小麦、大麦、燕麦、黑麦、黑小麦	20.000	1.500
HOT CLIMATE TAH. 炎热气候	Egypt埃及棉	50.000	1.000
	paddy水稻	10.000	1.000
	Sorghum, Sudanese Weed 高粱、苏丹杂草	5.000	1.000
COOKING DANE LEGUME 丹麦烹饪豆科植物	Cowpea豇豆	10.000	1.000
	Beans, Lentils, Chickpeas豆类, 扁豆, 鹰嘴豆	20.000	1.000
INDUSTRIAL PLANTS 工业植物	soy大豆	20.000	1.000
	sunflower向日葵	20.000	500
	Sugar Beet, Manger Beet糖用甜菜、甜菜	20.000	200
	safflower红花	10.000	1.500
	cotton棉花	10.000	750
	peanut花生	5.000	1.500
	Rapes up, Canola 油菜籽、菜籽	5.000	100
	hemp大麻	1.000	500
	flax亚麻	1.000	350
hashish大麻脂	1.000	25	

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	sesame芝麻	100	15
	tobacco烟草	50	2
MEADOW PASTURE AND FEED PLANTS 草甸牧场和饲料植物	Feed Peas饲料豌豆	20.000	2.000
	Bitter Pods, Myrnot 苦豆, 香豆	20.000	1.000
	Tricolors, Korunga 三叶草, 苜蓿	20.000	500
	Vegler, Belay紫罗兰	20.000	100
	Meadow Button草地纽扣草	10.000	100
	The lawn草坪	2.000	100
	Disjoints分蘖	2.000	40
	Brom, Kanyas, Pasture Barley, High Meadow Oats 布罗姆草、卡尼亚斯草、牧场 大麦、高草燕麦	2.000	30
	Yumak Herbs 尤马克草药	2.000	20
	Meadow Bunch Grass 草地丛生草	2.000	10
	clover三叶草	1.000	100
	Gazal Horn羚羊角	1.000	60
	Fox Tail, Kelp Tail 狐尾草、马尾草	15	30
VEGETABLES 蔬菜	pea豌豆	20.000	1.000
	Fresh Beans新鲜豌豆	10.000	1.500
	Fresh Fritters 油炸新鲜蔬菜	10.000	1.000
	horse bean马豆	5.000	1.500
	biceps	1.000	500
	Vegetable Beet 蔬菜甜菜	1.000	150
	Abas阿巴斯	1.000	150
	asparagus芦笋	1.000	100
	cress水芹	1.000	60
	spinach菠菜	1.000	50
	celery芹菜	1.000	25

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Broccoli西兰花	1.000	20
Garlic (Head) 大蒜 (头)	1.000	15
Zucchini, Watermelon 西葫芦、西瓜	500	250
melon瓜类	500	150
cucumber黄瓜	500	100
carrot胡萝卜	500	10
radish萝卜	100	60
Salads, Lettuces 沙拉、生菜	100	40
eggplant茄子	100	30
Pepper, Okra, Cauliflower, Cabbages, 辣椒、秋葵、花椰菜、卷心菜	100	20
Purslane, Leeks 马齿苋、韭菜	100	15
tomato西红柿	100	10
Parsley, Arugula, Dill 欧芹、芝麻菜、莳萝	20	4
turnip萝卜	70	100
Onion (Seed) 洋葱 (种子)	100	15
Onion (Shallots) 洋葱 (小洋葱)	500	1.000

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APPENDIX – 2附录-2

STANDARD SIZES TO BE BASED ON SAMPLING FROM THE YIGIN (WAREHOUSE, WAGON)

基于从仓库（仓库，货车）抽样的标准尺寸

Weight of Seeding种子重量

Less than 50 Kg.

少于50千克

50 - 500 Kg.

50-500千克

500 - 3,000 Kg.

500-3,000千克

3,000 - 20,000 Kg.

3,000-20,000千克

If it is more than 20,000 Kg.

如果大于20,000千克

Sample Number样品数量

At least 3 samples 至少3个样品

At least 5 samples 至少5个样品

1 sample is taken for every 500 Kg.

每500千克取1个样品

1 sample is taken for every 1,000 Kg.

每1,000千克取一个样品

1 sample is taken for every 2,000 Kg.

每2,000千克取1个样品

Samples are taken from the trollers made as much as the amounts specified in the second column annex-1.

从混合物中提取的样品与附件1第二栏中规定的数量相同。

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APPENDIX – 3 附录-3

SAMPLING PROCESS ON TEXTILE PRODUCTS

纺织品抽样过程

In the production of textile products, many factors such as the type of the used raw material, input materials, and machines can be considered as effective risk factors. Certified companies should have GOTS products analyzed at certain intervals based on the risk groups and risk assessments they have determined.

在纺织品生产中，使用的原材料类型、投入材料和机器等多种因素都可以被视为有效的风险因素。认证公司应根据他们确定的风险组和风险评估，在一定时间间隔内对GOTS产品进行分析。

ETKO auditor should check the risk analyzes made by the companies and request the test results (which shall be done according to GOTS articles 2.4.14, 2.4.15, 2.4.16 and 4.2) during the audit.

艾拓克

审核员应检查公司进行的风险分析，并在审核期间要求提供测试结果（应根据GOTS条款2.4.14、2.4.15、2.4.16和4.2进行）。

ETKO will prepare a list based on many factors such as the risk analysis, process type, input material, and parallel production of the companies. ETKO will request samples annually from the companies found in that list. The recommended criteria for sampling is determined in Table A below:

艾拓克

将根据公司的风险分析、工艺类型、投入材料和并行生产等多种因素准备一份清单。艾拓克将每年从该清单中发现的公司索抽样品。抽样的推荐标准在下表A中确定：

TABLE-A表A

SAMPLING TYPE样品类型	CRITERIA标准
Lint cotton/fibers/yarns (first processor) 绒毛/纤维/纱线（第一加工者）	GMO, Pesticide, Heavy metal 转基因，农药，重金属
Raw fabric 未加工布料	Pesticide, Heavy metal 农药，重金属
Greige-undeyed fabric&yarn 未染色布和纱线	AOX, Formaldehyde, Chlorofenoller 可吸附有机卤素，甲醛，氯酚
Dyed fabric染色布料	Formaldehyde, Carcinogenic Dyes (Arylamines), Heavy Metals, Disperse Dyes (Classified as Allergenic) 甲醛，致癌染料（芳香胺），重金属，分散染料（分类为致敏性）

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Printed fabric印花布料	Phthalates, Heavy Metals, Carcinogenic Dyes (Arylamines), 邻苯二甲酸盐, 重金属, 致癌染料 (芳香胺)
Apparel 服装	Formaldehyde, AOX, Heavy Metal, Disperse Dye, Carcinogenic Dyes (Arylamines) 甲醛, 可吸附性有机卤素, 重金属, 分散染料, 致癌染料 (芳香胺)

*The criteria specified in this table is the recommended one, Different criterias mentioned in the articles 2.4.14, 2.4.15, 2.4.16 and 4.2 of GOTS standard can be added.

*此表中指定的标准是推荐的，可以在GOTS标准的文章2.4.14、2.4.15、2.4.16和4.2中提到的不同标准可以被添加。

For the companies mentioned in the plan implemented by ETKO, if the test report made by the companies is not available, ETKO auditor should take a sample according to the TI05-Sampling Method during the audit. The sampling is performed in approved laboratories and the samples are tested according to the parameters recommended in Table A or according to the criteria specified in GOTS standard articles (2.4.14, 2.4.15, 2.4.16). The test results will be sent by the auditor to the following e-mail adress: analiz@etko.com.tr. The authorized person will evaluate the suitability of the residues values in accordance with the limit values specified in the articles 2.4.14, 2.4.15 and 2.4.16 mentioned in GOTS 6.0 standard, Then the authorized person will notify the company representative and the auditor by issuing an Evaluation Letter.

对于艾拓克实施的计划中提到的公司，如果公司出具的检测报告不可用，艾拓克审核员应在审计期间根据TI05抽样方法抽样品。样品在认可的实验室进行检测，并根据表A推荐的参数或GOTS标准文章（2.4.14、2.4.15、2.4.16）中指定的标准进行测试。测试结果将由审计员发送至以下电子邮件地址： analiz@etko.com.tr。授权人员将根据GOTS 6.0标准中提到的2.4.14、2.4.15和2.4.16文章中指定的限制值评估残留值的适宜性，然后授权人员将通过发出评估信函通知公司代表和审核员。

In case that samples cannot be taken from the planned companies, valid reasons should be stated and evidence should be recorded. Other companies must be added to the plan instead of the companies that ETKO didn't take samples from.

如果无法从计划中的公司抽样品，应说明有效理由并记录证据。必须将其他公司添加到计划中，以替代艾拓克未抽样品的公司。

Do not forget to follow the instruction attached for a proper sampling and testing of the GOTS Certified textile material.

不要忘记按照附件中的说明进行适当的抽样和测试GOTS认证的纺织品材料。

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APPENDIX – 4: Sampling Instruction 附录-4: 抽样简介

1. Take photo of the samples.
拍摄样品照片。
2. Take 3 counter samples one for ETKO, one for Client and one for Laboratory test.
Use sampling bags properly as instructed, therefore you need to provide sampling bags locally available. Poly bags could be self numbered and sealed as attached in the Picture. Where you can write some information over the polybags, or use a sticker label on the bag. If self sealed bags are not available, you can use other polybags but you need to seal with separate seals. See below pictures.

取3份样品，一个给艾拓

克，一个给客户，一个做实验室测试。按要求正确使用采样袋，因此需要提供当地可用的采样袋。聚乙烯袋可以自行编号和密封，如附件图片。你可以在塑料袋上写一些信息，或者在塑料袋上使用不干胶标签。如果没有自密封袋，你可以使用其他塑料袋，但你需要用单独的封条密封。请看下面的图片。



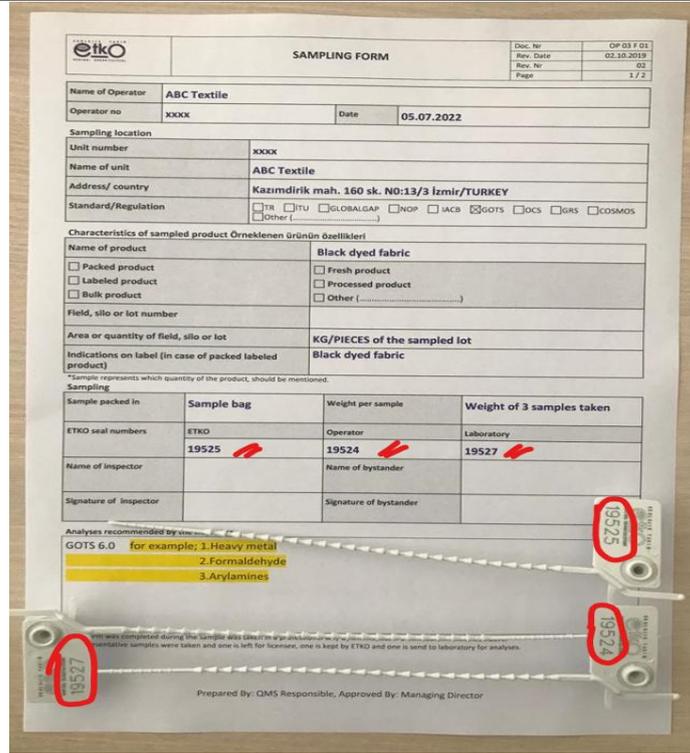
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3. Take a photo of the area where sampled products are kept, you take the Picture in a way that we can understand in which stage of the process samples taken.
给存放样品的地方拍张照片，这样我们就能明白样品是在哪个阶段进行的。



4. Before the sample is sent, it is asked which laboratory will perform which analysis, which laboratory the sample will be sent to, and after checking whether that laboratory is on the ETKO approved subcontractor list and relevant records such as contracts and performance evaluation, the sample is sent by filling out the analysis request form for the laboratory where the analysis will be performed.
在样品发送之前，需要询问哪个实验室将进行哪种分析，样品将被发送到哪个实验室，并在检查该实验室是否在艾拓克批准的分包商名单上以及相关的记录，如合同和绩效评估之后，通过填写将要进行分析的实验室的分析请求表来发送样品。
5. Filling must the ETKO OP 03 F 01 Sampling Form in 3 copies according, based on the sample taken. One of them is sent to the client, one is sent to ETKO (Analysis Department Responsible), and one is sent to the laboratory by the analysis department responsible for analysis. Do not forget to register in the form total quantity of the product sampled.
必须根据所抽样品填写3份ETKO OP 03 F 01 抽样表。其中一份发送给客户，一份发送给艾拓克（分析部门负责人），一份由负责分析的分析部门发送给实验室。不要忘记在表格中登记所抽样品的总数量。



6. In case Laboratory requires a sampling protocol completed for the sample to be prepared along with ETKO Sampling form, provide this form to ETKO.
如果实验室需要填写艾拓克
抽样表之外的抽样协议来准备样品， 请将此表格提供给艾拓克。
7. Original Test report to be provided by the Laboratory to ETKO and it may be cc to your email address.
实验室需要向艾拓克
提供原始的测试报告， 并且可以将副本发送到您的电子邮件地址。
ETKO address 艾拓克网址: analiz@etko.com.tr
8. Analyses cost to be paid by ETKO, provide evidence for transfer to the Laboratory account from ETKO Account.
分析费用由艾拓克支付， 请提供从艾拓克账户向实验室账户转账的证据。
9. Provide evidence that client was issued an invoice for testing fee by ETKO
提供证据表明艾拓克已向客户开具了测试费用的发票。

TABLE OF CHANGES 费用表

SECTION CONTENT	SECTION NO	REV. NO	REV. DATE
Change Table added (as a result of nonconformity written by TURKAK).	Change Table	07	29.09.2018
New standards and relevant section updates have been made.	3. Definitions 4.4 Packaging and shipping of the laboratory sample 5. SAMPLING PRINCIPLES: 5.1 ISO 4697 5.3 Sampling of Textile Products 5.7.1.1 Sampling for GMO Analysis in Seeds 5.8 ISO 1130-1975 Textile fibers - Some sampling methods for testing 5.9. ISO 20921-2019 (Textile - Determination of stable nitrogen isotope ratio in cotton fibers)	08	07.06.2021
"Appendix 3-Sampling Process on textile Products" was added.	Appendix 3	09	12.04.2022

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Sampling Method

抽样方法

Doc. Nr	TI 05
Rev. Date	08.03.2024
Rev. Nr	12
Page	60/60

Expression of "kg." has been changed "meters".	5.3	10	03.04.2023
The title 'Annex 4: Sampling and Testing Instruction' has been added.	Page 38	11	02.10.2023
It was added that as a result of the recommendation during the Ministry's inspection, 3 copies of the OP 03 F 01 Sampling Form will be prepared.	Page 39	11	02.10.2023
As a result of IOAS non-compliance, article 4 was added to the instruction.	APPENDIX - 4: Sampling Instruction	12	08.03.2024

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