

**QUALITY EVALUATION OF IMPORTED WHOLE LENTILS AND
ITS COMPLIANCE WITH SRI LANKA STANDARDS**



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ABSTRACT

Lentil (*Lens culinaris Medik.*) are an important food crop worldwide, valued for their nutritional content, which includes high-quality protein (20%- 30%), carbohydrates (60%), and essential micronutrients like calcium, iron, manganese, and selenium. Sri Lanka is a major consumer of lentils but depends entirely on imports to meet its domestic needs. Due to the increasing reliance on imported lentils, establishing standardized protocols is essential to ensure their physical, microbiological, and chemical safety. Sri Lanka imports approximately 100,000 to 120,000 MT of lentils each year, mainly as whole red lentils and split red lentils. This study conducted a preliminary quality assessment of imported whole lentils to verify compliance with the SLS 1573: 2017 standard. Thirty-five samples from different consignments were analyzed for key quality parameters, including moisture content (%), proportion of defective seeds, foreign material content (%), presence of live insects, 1000 seed weight (g), color, seed size, and total protein according to standard methods including SLS 1549: Part 1, SLS 1527, SLS ISO 520, were used respectively. Results showed a moisture content ranged from 8.42% to 11.31% within the allowable limit of 14%. The percentage of defective seeds ranged from 0.66% to 15.29%, a few exceeded the maximum permitted level of 10%. The foreign material content ranged from 0.04% to 5.98%, most samples complied with the SLS requirement of 5%. The 1000-seed weight ranged from 30.77g to 56.87g, exceeding the minimum requirement of 20g, indicating medium seed size. Live insects were observed in some samples. The protein content ranged from 22.25% to 28.42%, which falls within the typical range of 20%-30% for pulses. Negative correlation was found between protein content and defective seed percentage. A significant negative correlation was also observed between color parameters and defective seed %, indicating that higher defect levels were associated with darker and less vibrant seed color. These findings provide valuable baseline data for evaluating the quality of imported whole lentils and highlight the importance of systematic quality monitoring to ensure compliance with Sri Lanka standards.

Keywords: Whole lentil, Quality assessment, Safety, Sri Lanka Standards

TABLE OF CONTENTS

DECLARATION	iv
DEDICATION	v
ACKNOWLEDGMENT	vi
ABSTRACT	vii
CHAPTER 01	1
1.2 Problem statement	2
1.3 Objectives	3
CHAPTER 02	4
LITERATURE REVIEW	4
2.1 Classification of Lentils	4
2.2 Lentil Imports in Sri Lanka	4
2.3 Global Importance of Whole Lentils	5
2.4 Nutritional and Functional Significance of Lentils	6
2.5 Lentil Protein Quality and Health Benefits	7
2.6 Quality Parameters of Whole Lentils	8
2.6.1 Impact of Fungal growth and Mycotoxins on lentil quality	8
2.7 Quality Evaluation Techniques for Lentils	9
2.7.1 Assessment of Foreign Material content in Whole Lentils	9
2.7.2 Determination of Crude Proteins in Whole Lentils	9
2.7.3 Evaluation of Color characteristics in Whole Lentils	10
2.7.4 Mass of 1000 seeds in Whole Lentils	10
2.7.5 Evaluation of Seed Size in Whole Lentils	11
2.7.6 Moisture content percentage in Whole Lentils	11
2.7.7 Presence of Live Insect in Whole Lentils	11
2.8 Standards and Regulations for Lentil Quality Assessment	12
2.9 Consumer acceptance and market value	12
2.10 Sri Lanka Standards (SLS) for Whole Lentils	13
CHAPTER 03	14
3.1 Location and Time Duration	14
3.2 Experimental Design	14
3.3 Materials and Equipment	14
3.4 Methodology	15

3.4.1 Determination of Moisture Content (Hot air Oven Method).....	15
3.4.2 Determination of Total Foreign Material (%)	15
3.4.3 Determination of Total defective seeds (%)	16
3.4.4 Determination of Mass of 1000 seeds	17
3.4.5 Determination of Seed Size	18
3.4.6 Determination of Protein Content.....	19
3.4.7 Determination of seed color (Colorimeter)	21
CHAPTER 04	24
4.1 Determination of Total Foreign Material Percentage	24
4.2 Determination of Total Defective Percentage	25
4.3 Determination of Moisture Content percentage	26
4.4 Determination of Mass of 1000 seeds percentage.....	27
4.5 Determination of Seed coat Color of Whole Lentils.....	30
4.6 Determination of Seed Size of Whole Lentils.....	33
4.7 Determination of Presence of Live Insects	35
4.8 Correlation between Protein content and Defective Seed content	35
4.9 Correlation between internal Seed Color parameters and Defective Seed content ..	36
CHAPTER 05	38
REFERENCE.....	40