

COMPLIANCE OF FOOD PRODUCTS TO THE FRONT OF PACKAGE TRAFFIC LIGHT LABEL ACT IN ECUADOR IN 2016

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INTRODUCTION

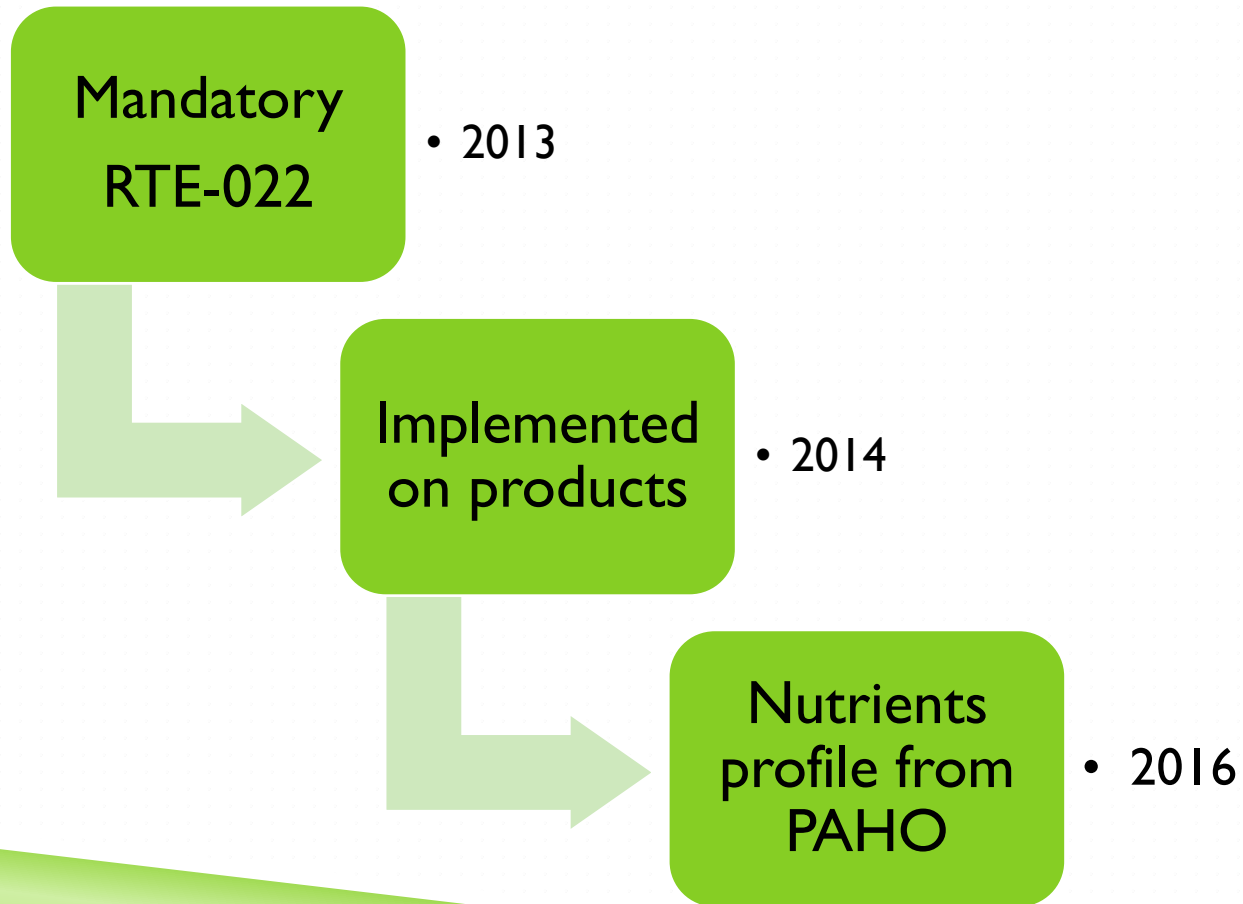


TABLE I. Nutrient profile guidelines for Traffic Light Labels in Ecuador


Level of nutrient content

Nutrient	Low - Green	Medium - Yellow	High -Red
Total Fat	≤ 3 g/100 g $\leq 1,5$ g/100 mL	$>3 < 20$ g/100 g $>1,5 < 10$ g/100 mL	≥ 20 g/100 g ≥ 10 g/100 mL
Sugar	≤ 5 g/100 g $\leq 2,5$ g/100 mL	$>5 < 15$ g/100 g $>2,5 < 7,5$ g/ 100 mL	≥ 15 g/100 g $\geq 7,5$ g/100 mL
Salt*	$\leq 0,3$ g/100 g $\leq 0,3$ g/100 mL 0,3 g of salt = 120 mg of sodium	$>0,3 < 1,5$ g/ 100 g $>0,3 < 1,5$ g/ 100 mL 120 - 600 mg of sodium	$\geq 1,5$ g/100 g $\geq 1,5$ g/100 mL >600 mg of sodium

OBJECTIVES

The aim of this study was to assess the compliance of products with the new labeling act regarding its composition, location and claims.

SPECIFIC OBJECTIVES

- ▶ To quantify the compliance of registered food product labels to the new mandatory regulation in Ecuador.
 - ▶ To establish the congruity between the colors of the traffic light label and the nutrient fact panel.
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METHODOLOGY: SAMPLE

TABLE 2: Weighted Sample distribution for analysis

N = 8,573	Food category	Number of Products
registered products	Milk and dairy products	61
	Confectionary products	49
	Fruit and vegetables	47
	Bakery products	35
	Cereals	26
	Meat products	26
Total sample 304 products 95% reliability SE= 0,05	Non alcoholic beverages	25
	Dressings and seasoning products	17
	Edible ice	9
	Ready to eat products	3
	Fats , oils and emulsions	3
	Fish and seafoods	3

METHODOLOGY: STATISTICAL ANALYSIS

Descriptive

- Compliance index – Number over 62 criteria completed

χ^2 Analysis

- Frequency of nutrient compliance

Wilcoxon
Analysis

- Total nutrient and single nutrient range analysis

METHODOLOGY: LABEL ANALYSIS

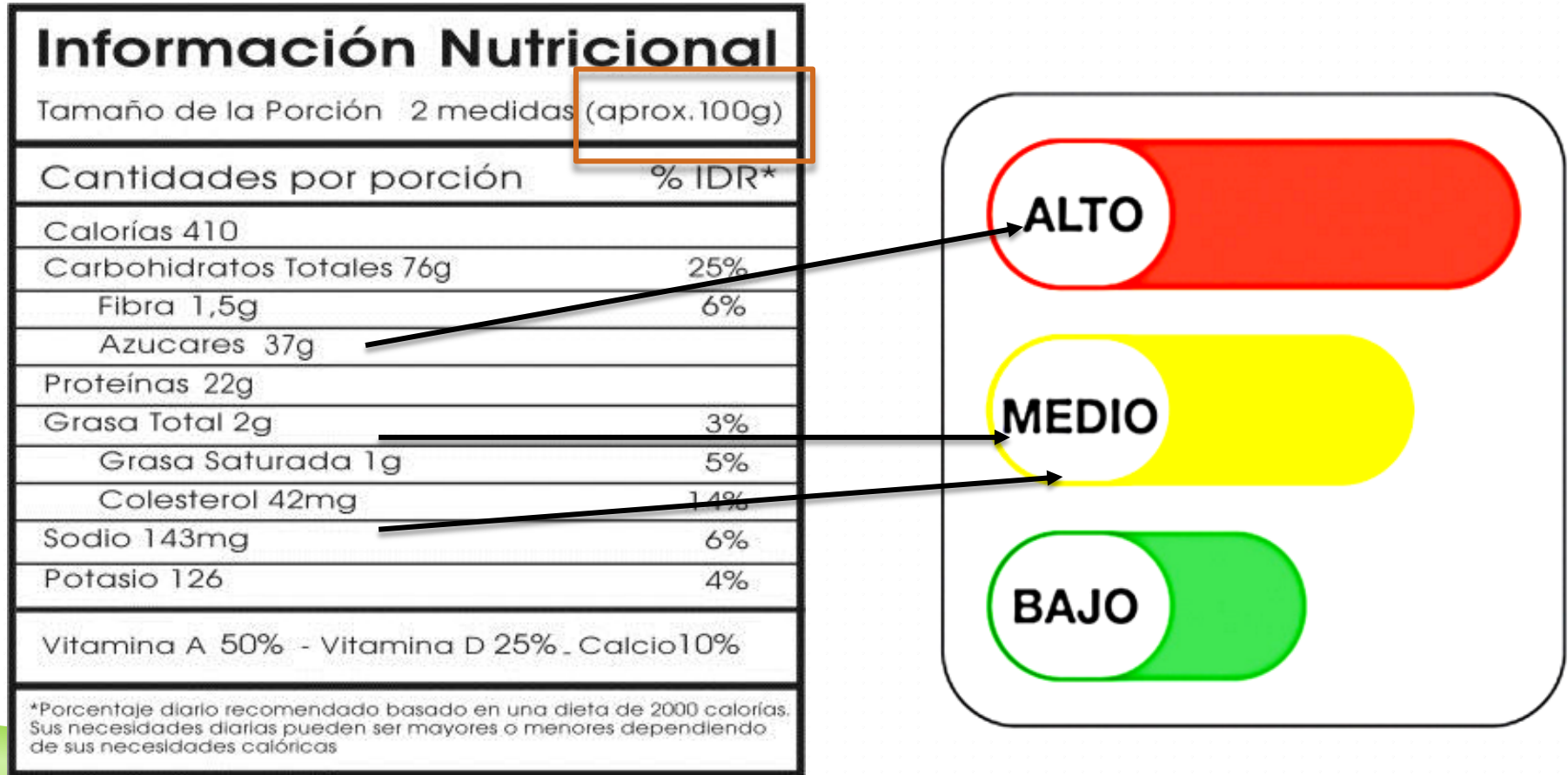


Figure I. Comparison between the Nutrition Fact Panel and the Traffic light label

MAIN FINDINGS

TABLE 3: Food category mean for compliance index to the New label regulation

Food Product Category	n	Claims	Ingredients	Nutrition fact panel	Traffic Light Label
Compliance Index (Mean ±SD)					
Milk and dairy products	61	0,94±0,07	0,87±0,07	0,92±0,07	0,82±0,14
Confectionary products	49	0,93±0,11	0,86±0,20	0,93±0,16	0,76±0,30
Fruit and vegetables	47	0,96±0,06	0,89±0,13	0,93±0,15	0,83±0,20
Bakery products	35	0,97±0,03	0,89±0,10	0,93±0,16	0,87±0,08
Cereals	26	0,96±0,06	0,85±0,16	0,93±0,10	0,80±0,18
Meat products	26	0,96±0,07	0,86±0,21	0,92±0,18	0,83±0,20
Non alcoholic beverages	25	0,94±0,06	0,87±0,16	0,93±0,11	0,81±0,26
Dressings and seasoning products	17	0,95±0,06	0,89±0,14	0,89±0,26	0,70±0,32
Edible ice	9	0,92±0,14	0,98±0,05	0,97±0,03	0,88±0,12
Fish and seafoods	3	1,00±0,00	0,93±0,12	0,99±0,02	0,58±0,52
Fats , oils and emulsions	3	0,95±0,06	0,62±0,44	0,97±0,02	0,95±0,08
Ready to eat foods	3	0,93±0,12	0,87±0,23	0,99±0,02	0,84±0,03

MAIN FINDINGS

TABLE 4: *Chi* Square test comparison between declared nutrient content and traffic light label observed on processed food products

	Nutrient content	Frequency observed	Frequency expected	P-value
Salt	High	28	44	2,4E-02
	Medium	57	54	
	Low	113	117	
Sugar	High	107	106	0,24
	Medium	43	31	
	Low	29	34	
Fat	High	66	56	0,39
	Medium	82	93	
	Low	32	32	

Significance $\alpha < 0.05$


MAIN FINDINGS

TABLE 4: Wilcoxon test of range for nutrients in traffic light label declared and observed in food products

Nutrient		Positive Range	Negative Range	P-Value
Total	N	68	56	<0,0001
	Sum	5427,00	2323,00	
Sugar	N	30	16	0,021
	Sum	752,00	329,00	
Fat	N	27	1	<0,0001
	Sum	391,00	15,00	
Salt	N	11	39	0,006
	Sum	355,50	919,50	

Discordant pairs: $120/606 = 19,8\%$

CONCLUSIONS

- ▶ There are important inconsistencies between label format, nutrition facts declaration, ingredients declaration, location of labels, product claims and the new label regulation.
 - ▶ Salt is the nutrient with positive range incongruity between the Traffic light label and Nutrition fact panel.
 - ▶ Authorities should control agreement between labels in order to avoid confusion among customers.
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ACKNOWLEDGMENTS

- ▶ Javier Cordero and Andrea Villacís. Students at Universidad de las Américas
- ▶ Universidad de las Américas and Universidad Tecnológica Equinoccial

Thanks for your attention

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