RESEARCH ON QUALITY OF THE DISTILLATES ON MARKET OF DÂMBOVIȚA COUNTY

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Abstract
This study was designed in response to REG / 110-2008 CE parameters on the classification of the physico-chemical industrial spirits, alcoholic drinks made from refined alcohol fermentation food, with or without added flavors, food coloring and sugar. This regulation was developed after finding that spirits fraud obtained by small producers in the empirical method, with operating facilities in discontinue distillation, without complying with the basic principles of operation of the distillation, the excess of the permissible toxic components. In this respect, we refer to methanol poisoning, the most frequently encountered are the same as acquiring organoleptical reason why ethanol can not be detected in any sensory considerable doses. At a dose of 30-50 mg methanol / kg, after a latency of approximately 1 hour the following symptoms: headache, violent abdominal pain, agitation, delirium, coma and hypothermia acidolitică. So the person survives poisoning, blindness occurs suddenly or gradually installed as a result of metabolizării liver under the influence of methanol alcooldehidrogenazelor resulting formic acid and final formoldehidrogenaze that destroy the optic nerve or transient by blocking enzymes happy (citocromoxidaza) in large quantity in the eye.

Keywords: alcoholic drinks, distillation, methanol, food, control, analysis.

1. INTRODUCTION

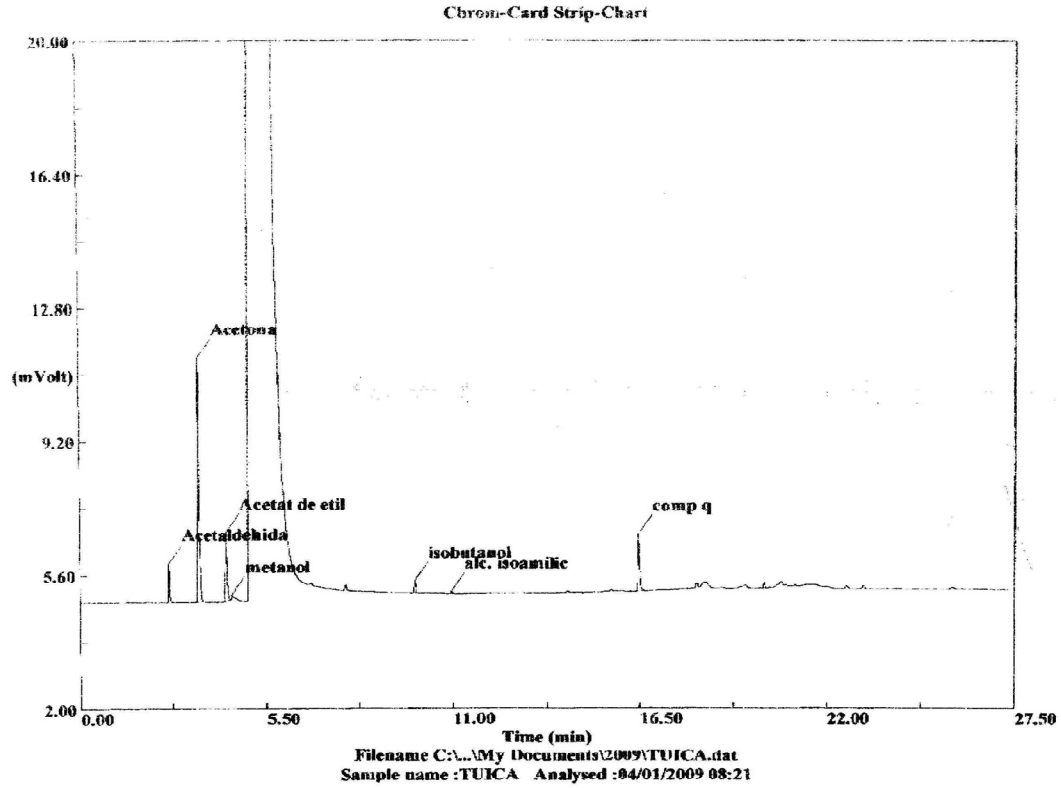
Reaching a level of protection of life and human health is one of the fundamental objectives of the legislation in the food domain. Experience has demonstrated that, the general procedures of verifying the conformity of a food product represent a solid basis for the assurance of food safety.
Concerning public health these procedures contain common procedures especially as regards to the responsibility of the producers (in all production, processing or distribution stages) respecting the requests regarding the fabrication of safe products for health [2]
The main objective of these norms is the assurance of a raised level of protection of the consumers from the point of view of food safety. In this respect Law no 150/2004 represents the basis for assuring a high level of protection for the consumer's health as regards to the composition of alimentary products.
This regulation was developed after finding that spirits fraud obtained by small producers in the empirical method, with operating facilities in discontinuă, without complying with the basic principles of operation of the distillation, the excess of the permissible toxic components [1, 2]

2. MATERIALS AND METHODES

For research we have taken 3 tests:
• Sample I (P1): plum brandy produced in a discontinue distillation of Valea Dambovitei (Vacaresti)
• Sample II (P2): Cristal vodka
• Sample III (P3): spirit drink;"Primus light"; produced by SC Euroavipo Group.
We are determined following chemical compounds:
• ethyl alcohol by the method of alcoholemeter.
• methanol, esters, higher alcohols, aldehidele using gas chromatography.

3. RESULTS AND DISCUSSION

The results are presented in the form and cromatograficals below: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16.40
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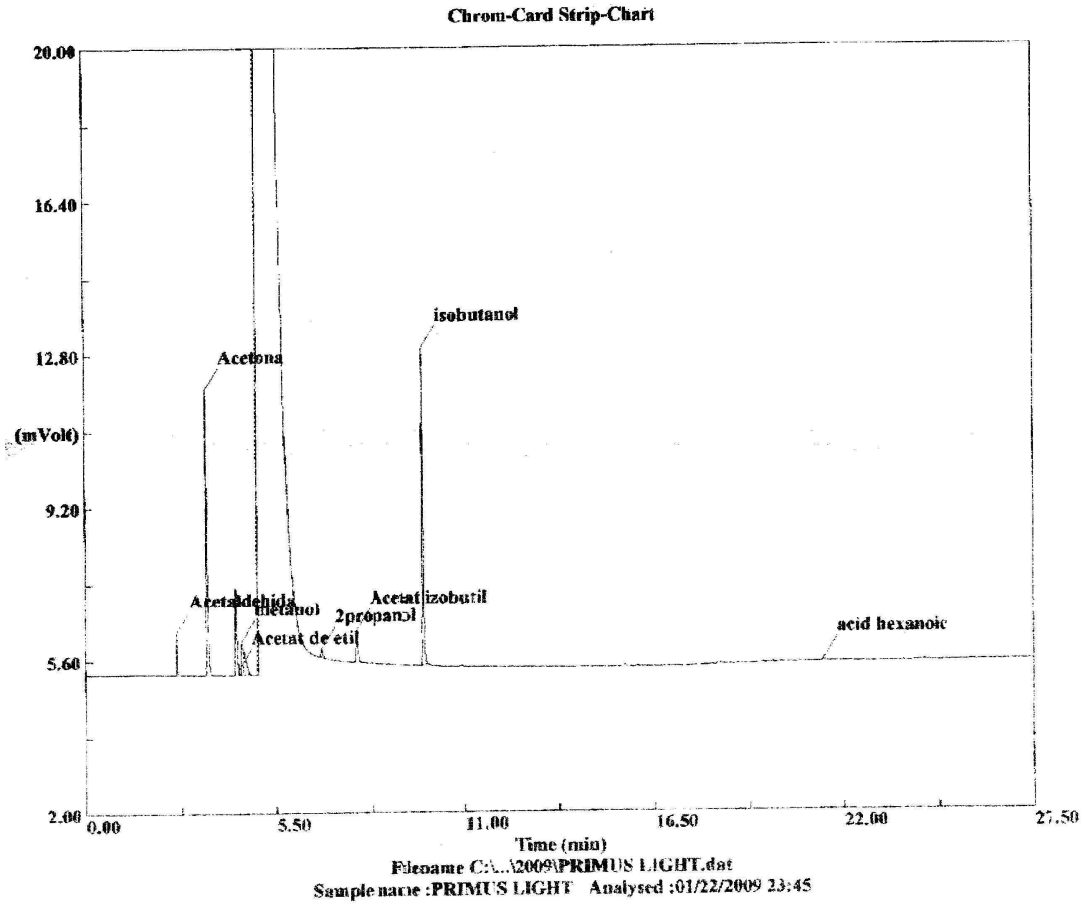
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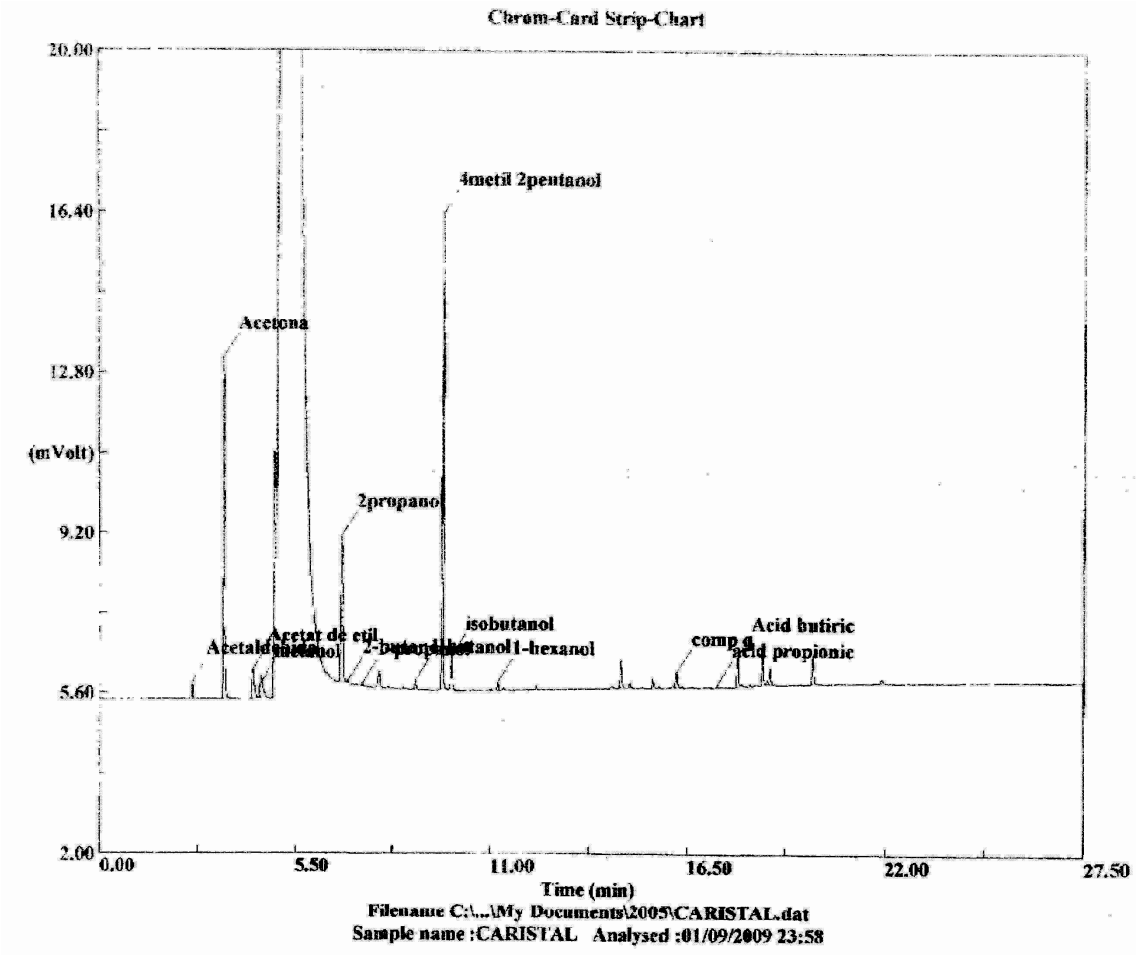

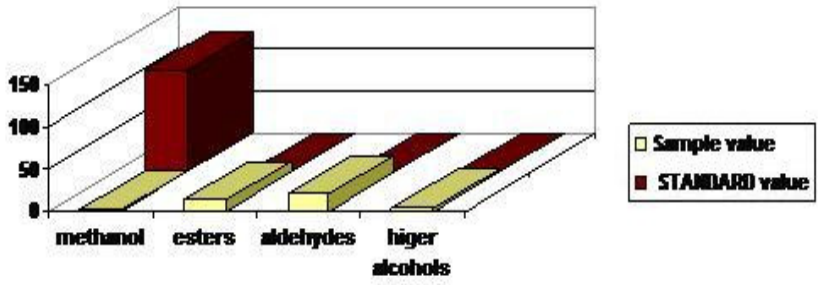

Fig.1. Chemical compounds-P_1

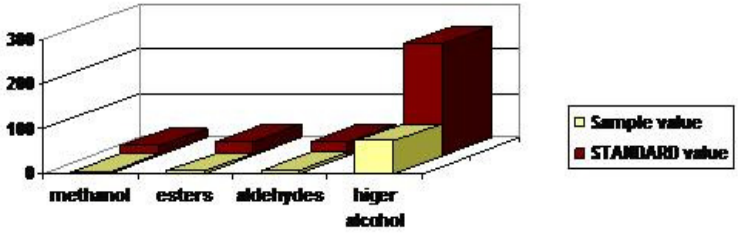

Fig. 2 Chemical compounds-P_2

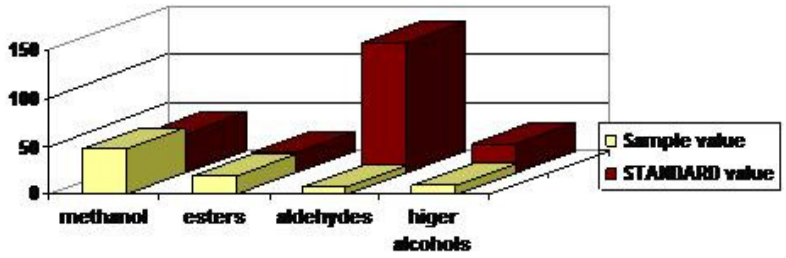

Fig.3. Chemical compounds-P_3

The results of physico-chemical analysis are presented in the Table 1.

Table 1-The results of the value of physico-chemical compounds:

Name compound	P_1	P_2	P_3
Alcohol (% vol/vol)	22.5	40	30
Methanol (g/hl a.a.)	1,182	1,715	10,36
Esters (g/hl a.a)	13,92	4,31	7,71
Aldehydes (g/ hl a.a)	20,81	5,51	18,86
Higher alcohols (g/hl a.a)	2,73	71,92	47,47

Changes in the values obtained from limitations in STAS 1515/92 are presented in graphs STP following:
In sample P1 analyze chemical compounds that are observed only in the falling values of STAS is methanol while for other compounds such values are exceeded:
• esters exceed 10.7 times the maximum permissible
• Aldehidele exceed of 41.62 times
• maximum permissible alcohols senior exceed 5.46 times the maximum permitted. high content in these compounds is due to incorrect management distillation operation which respects the principles of fractional distillation. These compounds should be found in section "brow" or "tail" and not in the ethanol fraction.
In samples P2 and P3 we observe that all chemical compounds are analyzed within the limits laid down in standards, with the exception of content in the higher alcohols P3 recording an increase of 1.18 times the values provided, this may be due to substance incorrect dosage of flavor.

4. CONCLUSIONS

From data obtained we can conclude that the European Commission Regulation 110-2008 justify prohibiting the operation of small distillation capacity invalidity without appropriate monitoring tools and personnel to meet the basic principles of distillation.

5. REFERENCES

[1]. C. Banu, "Aditivi si ingrediente pentru industria alimentara", Editura Tehnica, Bucuresti, 2000.
[2]. C. Banu (coordonator) – Manualul inginerului de industrie alimentara, Ed. Tehnica, Bucuresti, 1999