(PA) (NS) .control (1) (NS PA % 1+2) 6 (NS PA %3+0) 35 (NS PA % 0+3)3 (NS PA %1.5+1.5) 4 6 (NS PA %2+1). 1 .5 3 2 6 3 3 2 9 4 1 ° 28 . ° 37 3 4 6 .1 0 (

EFFECT OF ADDING Piminella Anisum and Nigella Sativa SEEDS ON QUALITY PROPERTIES OF LABORATORY SHORTENED CAKE

Ibtihal I. Al- Ani

Department of Home Economics, College of Education for Women, University of Baghdad. Baghdad-Iraq.

Abstract

The aim of this study was to investigate the effect of addition of *Pimpinella anisum* (PA) and *Nigella sativa* (NS) seeds in different percentages on the physical, sensory and microbial properties of the shortened cake. The results revealed that cake size of treatments 3 (0+3%PA and NS) and 6 (2+1% PA and NS) were significantly lager than that of treatment (1) control. The results of sensory evaluation showed that treatments 2 (1.5+1.5% PA and NS), 3, 4 (3+0%PA and NS), 5 (1+2%PA and NS) and 6 were not significantly higher than the control in the overall acceptance. Treatments 4 and 6 gained higher score of overall acceptance than treatments 2, 3 and 5. Other treatments, however, did not show significant

differences in comparison with control in the weight lose percentage of cake, cake size and overall acceptance. In regards with microbial tests it was found that the highest yeast number was in treatment 2 and the lowest in treatment 3 of the cake stored at 24°C for 3 days , while the number of yeasts was highest in treatment 2 and lowest in treatment 4 of the cake stored at 28°C for 9 days. Regarding bacteria and molds, however, no growth was observed in all treatments except treatment 1, while growth of gram positive bacteria was shown after 3 days of storing cake at 37°C. It can be concluded that the best treatment from the standpoint of cake size was treatment 6. This treatment comes second after treatment 4 concerning the overall acceptance. In addition to that cake of treatment 6 retained its softness at 24-28 °C for 9 days in comparison with treatment 1. Therefore, the PA and NS seeds are considered flavoring materials as well as inhibitors of bacteria and molds in the cake stored at 24-37 °C for 9 days.

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                 .[18]
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         Shortened cake
         ] Cambpell
     -:
         36
                     100
                                  41
                                             78
                                                         . [ ]
             1.5
                           83
                                        2.9
                            -:
                                             0.6
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                                                     black ) Nigella sativa
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               1.5 +
                            1.5
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283

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0 +	3	4
2 +	1	5
1 +	2	6

10

Nutrient agar

(loop)

Statistical

package of social sciences (SPPSS)

.[] (1955) Duncan

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Standing Height

. (p < 0.05)

[] (1975)

(2)

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5 % .

.(p <0.05)

6

3.70 4.19 1

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.1 5 4 2 (p <0.05)

.1 6 3

15

. (p<0.05)

. ± .[] (1975)

6 4 . 5 3 2

. 6 5 3 2

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b . ± .	a . ± .	a . ± .	b . ± .	. ± .	% + %
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a . ± .	a . ± .	a . ± .	a . ± .	0.00± .	% + %
ab . ± .	a . ± .	a . ± .	a . ± .	0.00± .	% + %
ab . ± .	a . ± .	a . ± .	ab 1. ± .	0.00± .	% + %
a . ± .	a . ± .	a . ± .	a . ± .	0.00± .	% + %

:3

					1	
a . ± .	a . ± .	. ± . a	a . ± .	. ± . a	% + %	
c . ± .	c . ± .	. ± . b	b . ± .	. ± .	% . + % .	
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b . ± .	ab . ± .	. ± . b	ab . ± .	. ± . b	% + %	
c . ± .	bc . ± .	. ± . b	b . ± .	. ± . C	% + %	
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(p<0.05)

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