



AYDIN ADNAN MENDERES UNIVERSITY COURSE INFORMATION FORM

Course Title		Industrial Microbiology and Stater Culture Usage in Food Industry							
Course Code		VBH638		Course Level		Third Cycle (Doctorate Degree)			
ECTS Credit	4	Workload	100 (<i>Hours</i>)	Theory	1	Practice	0	Laboratory	0
Objectives of the Course		Definition of starter cultures, usage, specifying mechanisms of action.							
Course Content		Effects of microorganisms defined as starter culture, general characteristics, starter cultures used in meat and dairy industry and their properties							
Work Placement		N/A							
Planned Learning Activities and Teaching Methods				Explanation (Presentation), Discussion					
Name of Lecturer(s)									

Assessment Methods and Criteria

Method	Quantity	Percentage (%)
Midterm Examination	1	40
Final Examination	1	60

Recommended or Required Reading

1	Kılıç S., Süt Mikrobiyolojisi, 2010.
2	Üçüncü M., Süt ve mamülleri teknolojisi, 2010
3	Anar Ş., Et ve et ürünleri teknolojisi, 2010.

Week	Weekly Detailed Course Contents	
1	Theoretical	Characteristics of starter cultures
2	Theoretical	Probiotics
3	Theoretical	Starter cultures used in meat products 1: Staphylococcus spp
4	Theoretical	Starter cultures used in meat products 2: Lactobacilli
5	Theoretical	Starter cultures used in meat products 3: Micrococcus spp
6	Theoretical	Starter cultures used in meat products 4: Kocuria spp
7	Theoretical	Starter cultures used in meat products 5: Pediococcus spp
8	Theoretical	Midterm
9	Theoretical	Starter cultures used in milk products 1: Lactococci
10	Theoretical	Starter cultures used in milk products 2: Lactobacilli
11	Theoretical	Starter cultures used in milk products 3: Streptococci
12	Theoretical	Starter cultures used in milk products 4: Leuconostoc spp
13	Theoretical	Starter cultures used in milk products 5: Bifidobacterium
14	Theoretical	Mold and yeast utilized as starter culture
15	Theoretical	Discussion

Workload Calculation

Activity	Quantity	Preparation	Duration	Total Workload
Lecture - Theory	14	2	1	42
Assignment	10	2	1	30
Midterm Examination	1	11	1	12
Final Examination	1	15	1	16
Total Workload (Hours)				100
[Total Workload (Hours) / 25*] = ECTS				4

*25 hour workload is accepted as 1 ECTS

Learning Outcomes

1	definition of starter cultures
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2	Determination of mechanisms of starter cultures
3	Specifying starter cultures used in meat product
4	Specifying starter cultures used in fermented milk industry
5	Probiotics and definition of probiotics

Programme Outcomes (Food Hygiene and Technology (Veterinary Medicine) Doctorate)

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Contribution of Learning Outcomes to Programme Outcomes 1:Very Low, 2:Low, 3:Medium, 4:High, 5:Very High

	L1	L2	L3	L4	L5
P1	5	5	5	5	5
P3	4	4	4	4	4
P4	4	4	4	4	4
P7	5	5	5	5	5
P9	4	4	4	4	4
P10	3	3	3	3	3

