PU Ph D Food Science and Technology

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Which involves achieving growth dry selling more of our existing products in existing markets?

- Product development
- Market penetration
- Market development
- Diversification

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Cinnamyl esterase activity in white wine contributes to the:-

- Hydrolysis of pectin
- Hydrolysis of coumaric and ferulic acid
- Hydrolysis of polyphenol
- Hydrolysis of rhamnogalacturonan

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Genes involved in nitrogen fixation:-

- nix gene
- nit gene
- nif gene
- nfi gene

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If permanent preservation is to occur, food must be protected from _____.

- Dust
- Contamination
- Recontamination
- Spoilage

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pH of egg yolk:-

- 7.0-7.5
- 5.5-5.8
- 6.0-6.3

- 6.5-7.0

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Natural convectional heat transfer is characterized by:-

- Peclet number
- Grashhoff number
- Prandtl number
- Reynolds number

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The descriptions dimensions, specifications, calculations and so forth, are placed in a formal document and assigned a document control number.

- Final engineering
- Determine the impact of environment
- Communication of the design
- Constraints

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Which of the following is a renewable energy source?

- Solar Energy
- Natural Gas
- Coal
- Bitumen

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N-acyl derivatives of nuraminic acid are generally called:-

- Phytic acid
- Sialic acid
- Uronic acid
- Muramic acid

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Eugenol is the principal component of:-

- coriander
- cassia

- clove
- cardamom

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Among the following, which is most important for carrying out a material balance?

- Waste Quantity
- Pressure
- Temperature of Products
- Mass

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Pekoe is a:-

- Method of rolling
- Leaf grade
- Broken grade
- None

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Which of following is anomeric pair?

- α-D-glucose and β-D-glucose
- D-glucose and D-fructose
- D-glucose and L-glucose
- α-D-glucose and β-L-glucose

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_____ is the act of developing an ideal scheme or plan of action.

- Evaluation of proposal solution
- Identification of constraints
- Component requirement
- Conceptualization

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What are the components of ceramide?

- Sphingosine+ fatty acid + phosphoric acid
- Sphingosine + fatty acid + phosphoric acid + nitrogenous base

- Sphingosine + fatty acid
- Glycerol + fatty acid + phosphoric acid

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If a purine base is substituted by a pyrimidne or viceversa the substitution is called:-

- Transition
- Mutation
- Transversion
- Transformation

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The typical cyclical structure of Glucose is α and β D:-

- Glucoside
- Glucosamine
- Glucofuranose
- Glucopyranose

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In Photosynthetic bacteria, photosynthesis takes place in:-

- Chromotophores
- Thylakoids
- Chloroplast
- Chlorophyll

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For an ideal gas, the compressibility factor:-

- Is unity at all temperature
- Decreases with pressure rise
- Is unity at Boyle's temperature
- Zero

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An artificial inducer commonly used in experimental work is:-

- β-galactosidase
- Calcium chloride

- Isopropyl thio galactoside (IPTG)
- X-gal

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What is invert sugar, and why is it so named?

- sugar mixture from hydrolysis of starch; α-glycosidic bonds are changed to β-glycosidic bonds
- the sugar mixture from hydrolysis of sucrose; the optical rotation changes from (+) to (-)
- the sugar mixture from hydrolysis of sucrose; fructose is isomerized to glucose
- the sugar mixture from hydrolysis of starch; glucose is isomerized to fructose

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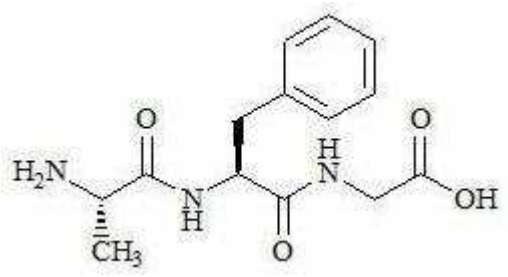
Identify the correct name for the following peptide.



- glycyl-L-phenylalanyl-L-alanine
- L-phenylalanyl-L-alanyl-glycine
- L-alanyl-L-phenylalanyl-glycine
- L-alanyl-glycyl-L-phenylalanine

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The first mycotoxin recognized as affecting human beings:-

- Shiga toxin
- Ergot
- Pertussis
- α toxin

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_____ objective method for measuring volatile flavouring compounds in food products.

- Hunter meter
- Volatile meter

- Long sought meter
- Mechanical meter

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The Chief spoilage organism on smoked fish are:-

- Mold
- Bacteria
- Both Mold & bacteria
- Fungi

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The enzyme involved in enzymatic browning reactions is:-

- Laccases
- Diphenol hydrases
- Polyphenol oxidases
- Polyphenol hydrolases

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_____ is referred to conducting an analysis to determine better the context of your product or package in a new market.

- Contextual analysis
- Structural specifications
- Dynamic status evaluation
- Concept selection

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Which of the following statements is untrue about protein secondary structure?

- The ability of peptide bonds to form intramolecular hydrogen bonds is important to secondary structure.
- The alpha helix, beta pleated sheet and beta turns are examples of protein secondary structure.
- The hydrophilic/hydrophobic character of amino acid residues is important to secondary structure.
- The steric influence of amino acid residues is important to secondary structure.

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The food that readily spoil unless special preservative methods are used, classified under:-

- Perishable foods

- Semi perishable foods
- Stable foods
- Non perishable foods

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Among the following microorganism complete pathway of glucose to lactic acid is found only in:-

- Bifidiobacterium
- Lactobacillus
- Lactococcus
- Leuconostoc

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Meat of goat is called:-

- Mutton
- Chevon
- Hog
- Veal

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Greenhouse effect refers to increase in:-

- Greenery
- Carbon monoxide
- Global temperature
- Atmospheric pressure

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Colonies resembling molar teeth are produced by:-

- Nocardia brasiliensis
- Actinomadura madurae
- Nocardia asteronoids
- Actinomyces israelii

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Nigerose is a:-

- Trisaccharide

- Polysaccharide
- Disaccharide
- Monosaccharide

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When heat is added or removed, resulting in a change of temperature is called as:-

- Latent heat
- Sensible heat
- Heat capacity
- Specific heat

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Pasteurization temperature of milk:-

- 62 C
- 72 C
- 82 C
- 52 C

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Respiratory Quotient RQ is a measure of:-

- Amount of O_2 formed / gram of substrate feed
- Amount of CO_2 formed / gram of substrate feed
- Amount of CO_2 formed/ gram of O_2 feed
- None of the above

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Antibiotic Gramicidin S is obtained from the bacterium:-

- Bacillus cereus
- Bacillus licheniformis
- Bacillus subtilis
- Bacillus brevis

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Cane sugar is _____ and milk sugar is _____.

- Lactose and sucrose

- Sucrose and lactose
- Glucose and sucrose
- Lactose and Maltose

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Starch used in frozen food should contain:-

- Amylose content dose does not make any difference
- Less amylopectin
- High amylose
- Less amylose

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_____ the laboratory studies are undertaken during which environmental conditions are accelerated by a known factor, so that the product deteriorates at a faster than normal rates.

- Shelf life prototype
- Accelerated shelf life testing
- Shelf life of existing products
- Endpoint study

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Peclet number (Pe) is given by:-

- Pe = Re Pr
- 9Pe = Nu Re
- Pe = Pr/Re
- Pe = Re/Pr

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Grashhoff number is:-

- $\mu^2 / ßg\Delta tl^2\rho^3$
- $ßg\Delta tl^2\rho^3 / \mu^2$
- $ßg\Delta tl^3\rho^2 / \mu^2$
- $\mu^2 / ßg\Delta tl^3\rho^2$

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A chemical substance resembling a base is called a:-

- Base strategy
- Base substance
- Base analogues
- Base molecule

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Tomato ketchup is a type of _____ fluid.

- Bingham plastic
- Newtonian
- Dilatent
- Plastic

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The proteins in combination with prosthetic group like pigment is:-

- Lipoprotein
- Chromoprotein
- Phosphoprotein
- Metalloprotein

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Luedeking – Pircet equation is his study of:-

- Product formation kinetics
- Oxygen utilization kinetics
- Substrate utilization
- None of the above

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Anaerobic decomposition of proteins, peptides or aminoacids results in the production of obnoxious odours and is then called:-

- Deamination
- Denitrification
- Putrefaction

- Nitrification

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Which of the following molecules is involved in the feedback control of the enzyme phosphorylase *a*?

- glucose-1-phosphate
- AMP
- adrenaline'
- glycogen

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Psoralens are:-

- Food additives
- Digestive compound
- Food allergens
- Natural toxicans

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Which of the following statements most correctly defines the isoelectric point?

- the pH at which all molecular species are neutral and uncharged.
- the pH at which negatively and positively charged molecular species are present in equal concentration.
- the pH at which all molecular species are ionized and that carry the same charge.
- the pH at which half the molecular species are ionized (charged) and the other half unionized.

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hd/k is called:-

- Grashhoff number
- Schmidt number
- Rayleigh number
- None of these

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The average length of time that a product spends on the retail shelf is found by monitoring sales from retails outlets and from this the required shelf life is estimated.

- Processing pavameters
- Turnover time

- Literature study
- Newly developed products Turnover time

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A disaccharide formed by 1,1-glycosidic linkage between their monosaccharide units is:-

- Lactose
- Sucrose
- Maltose
- Trehalose

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An example of sulphur containing amino acid is:-

- 2-Amino-3-methylbutanoic acid
- 2-Amino-3-mercaptopropanoic acid
- 2-Amino-3-hydroxypropanoic acid
- Amino acetic acid

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Enthalpy of the product is _____ on freezing.

- Increases and Decreases
- Decreases
- Remain same
- Increases

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Unit of mass velocity is:-

- Kg/hr
- Kg/m hr
- Kg/m^2
- Kg/m^2 hr

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Identify the strongest form of intermolecular bonding that could be formed involving the residue of the amino acid serine.

- ionic bond

- hydrogen bond
- van der Waals interactions
- none of the above

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_____ is a newly packaged and labelled form of existing products prompted through new advertising strategies.

- Creative products
- Line extension
- Reformulate the existing products
- Repositioned existing products

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Fruit juice can be concentrated in a:-

- High pressure evaporator
- Long tube evaporator
- Falling film evaporator
- None of theses

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Modification of starch may affect:-

- Viscosity
- Gelatinization and heating time
- Freezing stability and cold water stability
- All of the above

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Which of the following pair of carbohydrates are anomers of each other?

- α- Glucose and β-Fructose
- α- Glucose and β-Glucose
- α- Glucose and α- Mannose
- All of the above

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Enzymes are:-

- carbohydrates
- DNA molecule
- proteins
- nucleic acids

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Richest source of Riboflavin is:-

- Mango
- Bael
- Papaya
- Karonda

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Carbonation in soft drinks is commonly achieved by adding:-

- carbon dioxide
- sodium carbonate
- calcium carbonate
- sodium bicarbonate

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Fats are abundantly found in:-

- a) Reproductive tissue
- b) Vegetative tissue
- c) Both (a) and (b)
- d) None of these

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Soft dough is due to:-

- High temperature
- Low temperature
- Below normal temperature
- Normal temperature

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Which refrigerant is commonly is used in cold storage in our country?

- Ammonia
- Carbide
- Sodium benzoate
- Ethylene

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Amino acids are joined by:-

- peptide bond
- glycosidic bond
- hydrogen bond
- ionic bond

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Vegetable oils are rich in:-

- ω-3 fatty acids
- ω-6 fatty acids
- ω-5 fatty acids
- ω-4 fatty acids

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What is the ratio of flour, fat, salt and water in the preparation of water biscuits and matzos?

- 100 : 6.5 : 1 : 29
- 70 : 6.5 : 1 : 15
- 90 : 7.5 : 1 : 25
- 80 : 6.5 : 1 : 20

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Richest source of B12:-

- Goat liver and Spirulina
- Chocolate and green grains
- Rice and egg
- Carrot and chicken breast

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What is phytic acid?

- Hexaphosphoric acid of inositol
- Potassium salt of hexaphosphoric acid
- Phosphorous associated with mannitol
- None of the above

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Liquid form of triglycerides at ordinary room temperature are called:-

- Fats
- Oils
- Solid
- None of these

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Iodine value measures:-

- Degree of saturation
- Amount of carbon present
- Degree of unsaturation
- Degree of oxidation

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HTST milk is milk that has been processed using _____.~. procedures.

- homogenous tempering short time
- hot temperature short tempering
- high temperature short time
- homogenization time scalding temperature

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F good gels are examples of:-

- Plastic solids
- Gels are not solids
- Elastic solids
- None of the above

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A dipeptide has:-

- 2 amino acids and 3 peptide bonds
- 2 amino acids and 2 peptide bonds
- 2 amino acids and 4 peptide bonds
- 3 amino acids and 3 peptide bonds

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Reynolds number is:-

- Ratio b/w inertial force and pressure
- Ratio b/w viscous force and pressure difference
- Ratio b/w inertial force and viscous force
- Ratio b/w viscous force and inertial force

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The primary structure of protein represents:-

- 3-dimensional structure of protein
- sub unit structure of protein
- helical structure of protein
- Linear sequence of amino acids joined by peptide bond

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Which of the following cells secretes Eselectins?

- Microglial cells
- Eosinophils
- Endothelial cells
- Epithelial cells

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Bovine keratitis is caused by:-

- *Bacteroides*
- *Staphylococcus*
- *Bordetellapertosis*
- *Morexellabovis*

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The micro-organism which is present in both fresh and frozen juices is:-

- *P. chrysogenum*
- *E. coli*
- *Entereobacteraerogenes*
- None of these

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Sources of lead in our environment are:-

- fillings for teeth, refrigerators, crystal glassware, oil paintings
- x-ray shielding, fillings for teeth, automobile paint, bathroom fixtures
- paint, crystal glassware, old water pipes, PVC pipes
- paint, x-ray shielding, old water pipes, residue from leaded gasoline

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In the US, the percentage of traffic deaths that are alcohol related is:-

- 20%
- 75%
- 10%
- 40%

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Bond involved in the dough of the flour is/are:-

- Hydrogen bond
- Covalant bond
- Hydrophobic bond
- All of the above

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Vacuum cooling is most suitable for:-

- Leafy vegetables
- Tubers
- Fruits
- None of these

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299 PU_2015_158
Arrange the potencies of toxin in descending order of the following canned foods:-

- corn> peas>string beans>spinach
- peas>string beans>spinach> corn
- corn> spinach> peas>string beans
- corn> string bean>peas>spinach

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A bright red lividity indicates:-

- cyanide poisoning
- carbon monoxide poisoning
- strychnine poisoning
- arsenic poisoning

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A spot test can be used to determine:-

- whether a particular white powder is casine
- whether a particular white powder is cocaine
- whether a particular white powder is not cocaine
- whether a particular white powder is protin

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The production of acetic acid from ethanol is an:-

- anaerobic process
- aerobic process
- both anaerobic & aerobic
- neither anaerobic nor aerobic

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Anthracnose is a defect which can be observed as:-

- spotting of leaves
- spotting of seedpods
- spotting of fruits
- all of these

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What is meant by the therapeutic ratio or index?

- The ratio of LD_{50} to ED_{99}
- The ratio of ED_{99} to ED_5
- The ratio of LD_{50} to ED_{50}
- The ratio of LD_1 to LD_5

94 of 100

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Best maturity indices of orange is:-

- Sugar %
- TSS
- Acid %
- Brix : arid ratio

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The organism B. *brevis* can be used commercially for the production of:-

- tyrocidin
- tyrothricin (bacitracin tyrocidin complex)
- gramicidin A
- all of the above

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Which of the following is NOT a narcotic?

- Fentanyl
- Ectasy
- Heroine
- All of these are narcotics

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Vinegar is a fermentation derived food product containing not less than:-

- 25% acetic acid
- 6% acetic acid
- 15% acetic acid
- 4% acetic acid

98 of 100

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Cherry coffee is obtained by:-

- Chemical treatment
- Wet processing
- Vacuum processing
- Dry processing

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In which of the following the enzyme substrate complex is irreversible in nature?

- Both Competitive & Non- competitive inhibition
- Un Competitive inhibition
- Non- Competitive inhibition
- Competitive inhibition

100 of 100

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The spoilage of eggs by fungi goes through stages of mold growth that give the defects their names. Very early mold growth is termed:-

- bacterias spot
- superficial fungal spoilage
- fungal rotting
- pin-spot molding