**Foods 3.00 Word Wall- Vocabulary and Questions to help you prepare for your test.**

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| Six main nutrient groups:  Water-  Carbohydrates-  Fats-  Proteins-  Vitamins-  Minerals- | Water, a main component of most food, affects food’s quality through:  A\_\_\_\_\_earance  Safety  Taste  T\_\_\_\_\_\_\_re | The amount of water in a food and how \_\_\_\_\_\_\_\_\_\_\_\_ the food is are related. Moisture content and water activity are two common ways that the amount of water is \_\_\_\_\_\_\_\_\_\_\_\_\_ in food.  The moisture content of all samples are determined by measuring the \_\_\_\_\_\_\_ of the material before and after the water is removed by evaporations.  Calculation:  (Initial Sample Wight- \_\_\_\_\_\_\_\_ Sample Weight)/ Initial Sample Weight  X 100 |
| Water can be found in food in two forms:  Free-  Bound- | Water quality is changed by adding:  Minerals  Salt    \_\_\_\_\_\_\_gar | By adding one of these substances it changes the way water reacts and its:  Physical and  Chemical Characteristics |
| Hard water has a high \_\_\_\_\_\_\_\_\_ content.  Soft water, which has a \_\_\_\_\_\_ mineral content, changes flavor and \_\_\_\_\_\_\_\_\_\_\_. | Water functions in food as a :  Heat medium-  Universal solvent-  Gas in water solutions:  Liquid in water solutions:  Solid in water solutions: | Water molecules will bond to but not become a part of caffeine molecules in cells. This is an example of which form of water?  When lemon juice splashes in your face when you cut a lemon, what form of water is this? |
| What effect does warm water have on sweeteners?  By removing \_\_\_\_\_\_\_\_\_ there is less chance of food borne illness.  If you have3 one kilogram of mushrooms and after drying there is 190 grams, what is the percentage of water loss? | When you \_\_\_\_\_\_\_\_\_ the hardness of water there is also an increase of mineral content.  Transferring energy is an example of a function of \_\_\_\_\_ter.  An example of a solid-in-water solution is \_\_\_\_\_\_\_\_\_\_\_-aid. | Soda is an example of \_\_\_\_\_\_\_\_\_\_\_ and gas in water.  Orange juice is an example of \_\_\_\_\_\_\_\_\_\_\_\_-in-water solution. |
| Carbohydrates, a group of nutrients composed of \_\_\_\_\_\_\_\_\_\_\_\_, \_\_\_\_\_\_\_\_\_\_, and oxygen are classified as sugars and complex carbohydrates.  Sugars, the simplest type of carbohydrate, are called \_\_\_\_\_\_\_\_saccharides and \_\_\_\_\_saccharides. | Disaccharides, the most commonly consumed sugar, include:  Sucrose-  Maltose-  Lactose- | Sugars have six key functions in food:   * Sweetener * \_\_\_\_\_\_\_\_servative * Tenderizer * Aid in the process of \_\_\_\_\_\_\_\_\_\_\_\_ization * Aid in caramelization * Aid in fermentation |
| Complex carbohydrates include starches, cellulose, gums, and \_\_\_\_\_\_\_\_. The key functions of complex carbohydrates in food include:   * Structure * \_\_\_\_\_\_\_\_\_\_ agent * Thickening agent | The different physical properties of starches affecting its functionality in food include:   * Retrogradation * Viscosity * Stability * Opacity vs. Translucency * Texture | Lipids, like carbohydrates, contain \_\_\_\_\_\_\_\_, hydrogen, and oxygen. They do not provide structure to food and are insoluble in water. Lipids are categorized by the physical state at room temperature.  \_\_\_\_\_\_\_\_: room temperature  Oils: liquid at room temperature |
| Three physical characteristics impact how lipids function in food:  Melting and solidification points  Less dense than water  Tendency to deteriorate | Lipids have six key functions in food preparation:   * Transfer \_\_\_\_\_\_\_\_\_\_\_ * Tenderize * \_\_\_\_rate * Enhance \_\_\_\_\_\_\_\_\_flavor * Lubricate * Serve as \_\_\_\_\_\_\_\_\_\_\_ in emulsions | Proteins are made up of carbon, hydrogen, oxygen and \_\_\_\_\_\_\_\_\_ (and usually sulfur).  Denaturation usually changes the physical characteristics of protein, is due to:   * Temperature changes * Physical methods * Chemical methods |
| Protein has many functions in food, such as:   * Forms \_\_\_\_\_\_ * Texturizes * E\_\_\_\_\_\_\_sifies * Produces \_\_\_\_\_ams | Vitamins are \_\_\_\_ganic compounds categorized as fat-soluble or water-soluble. Minerals are elements.   * Fat soluble vitamins are: * Found in fats and \_\_\_\_\_\_\_ in food. * Fairly \_\_\_\_\_\_\_\_ stable and water stable * Vitamins, A, D,E and \_\_\_\_\_ | Effects of processing depend on the sensitivity of the nutrient to:   * Heat * O\_\_\_\_ygen * pH * Light   Specific effects of processing on vitamins-vitamin content more likely to be affected by processing than \_\_\_\_\_\_\_\_\_ content |
| |  |  | | --- | --- | | Vitamin | Effect of Processing | | Vitamin C (\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ acid) | Decrease during \_\_\_\_\_\_\_\_\_\_\_\_\_, drying, heating, \_\_\_\_\_\_\_\_idation, and chopping/\_\_\_\_\_\_\_\_\_\_\_. Stable to heat under \_\_\_\_\_\_\_\_\_\_\_\_\_ conditions. | | Vitamin B1 (\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_) | Destroyed by high \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_, neutral and alkaline conditions, lost in \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ water | | Vitamin B2 (\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_) | Sensitive to \_\_\_\_\_\_\_\_\_ at neutral and alkaline conditions.  Moderately heat stable under neutral conditions.  Sensitive to \_\_\_\_\_\_\_\_\_ under alkaline conditions. | | Vitamin B3 (\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_) | Most stable \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_.  Stable to heat and \_\_\_\_\_\_\_\_\_\_.  Leaches in cooking water. | | Folate | Decreases with storage and prolonged \_\_\_\_\_\_\_\_\_\_\_\_\_\_.  Lost in cooking water.  Destroyed by using \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ utensils. | | Vitaminb B6 (\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_) | Heat stable in alkaline and \_\_\_\_\_\_\_\_\_\_\_\_\_\_ conditions. | | Vitamin B12 | Destroyed by light and high \_\_\_\_\_. | | Carotenes | Easily destroyed by \_\_\_\_\_\_\_\_\_\_\_.  Destroyed when exposed to light. | | Vitamin A | Easily destroyed by \_\_\_\_\_\_\_\_\_\_. | | Vitamins D and E | Oxidize when exposed to heat and \_\_\_\_\_\_\_\_\_\_\_\_. | | | |
| Additives perform useful functions in foods. Vitamins and minerals added to make up for those lacking in a person’s diet or \_\_\_\_\_\_\_\_\_ in processing. | Enrichment- | Fortification- |
| How do sugars differ from starches?  The number of \_\_\_\_\_\_\_\_\_\_\_\_\_ units.  How do sugars differ from starches?  The \_\_\_\_\_\_\_\_\_\_ in food mixtures.  Which characteristic is found in lipids and NOT carbohydrates?  \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ point. | Which characteristic is found in lipids and NOT carbohydrates?  \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ in water.  What causes lipids to solidify rather than freeze?  Various \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ points of the different fatty acids.  Which type of lipid is MOST LIKELY to cause rancidity during processing and storage?  \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ oils | Proteins can act as an emulsifier because they:  Have a polar and \_\_\_\_\_\_\_\_\_\_\_\_ end.  What is an example of a complex carbohydrate?  Gums or Galactose  Which is a monosaccharide?  Pectin or Fructose  Which is a function of lipids?  Liquid in \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_. |
| Which is a function of lipids?  Preservative or Tenderizer  Which is an example of a disaccharide is used in baking and pastry for sweetening a product?  Sucrose or Fructose | Which is a function of lipids?  Crystallization or Heat Transfer  Which is an example of an element found in protein but not in sugar?  Sulfur or Oxygen | Which food is the best source for protein?  Beef or Beans  Which is an example of an element found in protein but not in sugar?  Nitrogen or Hydrogen |
| As sugar content increases in baked goods, browning increases. This is an example of…. | Which food product has qualities caused by prolonged heating of sugar in processing?  Evaporated milk or Fudge | Which function of sugar will result in a more delicate crumb in baked goods?  Fermentation or Tenderization |
| Which classification of starch is also known as fiber in the diet?  Gums or Cellulose | Which is an example of a complex starch that thickens salad dressings?  Carageenan Gum or Pectin | During chilling, if a gel thickens what is the result?  Crystallization or Retrogradation |
| Which ingredient will cause fat to stabilize during processing?  Fortified milk or egg yolk | Which lipids will create the best aeration of a batter during mixing?  Margarine or Butter | Which function of starch causes batter to cling to onion rings during frying?  Texturizing agent or binding agent |
| The tender, flaky texture of a piecrust is a result of which type of fat?  Liquid margarine or hydrogenated shortening | Which method of protein denaturation is the most likely to be reversible? | Creaming butter and sugar is an example of :  Synersis or aerating butter |
| Which causes denaturation of a protein?  Adding lemon juice or chilling | Which process will interfere with gluten formation?  Mixing or cutting in butter | What is the function of a protein in an emulsion?  Foaming agent or stabilizer |
| What is an example of a food product made from texturized protein? | What is a good source of beta-carotene? | Which category of nutrients is unstable in processing? |
| What is an example of an enriched product?  Bread with iron or Milk with vitamin A | Enzymes-  Phytochemicals- | Key properties of enzymes include:  Ripen fruits and \_\_\_\_\_\_\_\_\_\_\_\_\_   * Spoil fruits and vegetables after harvest * Change flavor, color, texture, and nutritive value of food * Decrease shelf-life if not inactivated |
| Extract and purify commercially to:   * Break down starch * \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ meat * Clarify \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ * Coagulate milk | Naturally-occurring enzymes:   * Trigger enzymatic browing * Found in some fruits * Found in some meat tenderizers | Factors that affect enzyme activity include   * Water\_\_\_\_\_\_\_\_\_ * Amount of substrate |
| Denaturization changes the structure of proteins and \_\_\_\_\_\_\_\_\_\_\_\_ the enzyme activity. | Factors that denature enzymes: | Heat  Acids and bases  Salts  Enzyme \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ |
| Enzymes have both positive and negative effects.  Positive effects:   * Makes food easier to eat * Preserves food * Improves flavor, quality or \_\_\_\_\_\_\_\_\_\_\_\_\_.   Negative effects:   * Enzymatic browning * Spoilage | Phytochemicals have seven families  Allyl sulfides-  Carotenoids-  Flavonoids-  Indoles- | Phenolic acids-  Saponins-  Terpenes- |
| What is the effect of salts on enzymes?  Raises the pH causing coagulation or Inhibits their ability to react  What is the effect of a strong acid on enzymes?  Enzyme reactions are unaltered or The enzyme-substrate complex cannot form | How does enzyme activity improve the flavor of food?  Prevents spoilage or causes ripening  Enzyme reactions occur more rapidly as a result of:  Lower temperature or water availability | Which action will result in denaturing the enzymes present?  Chilling in the refrigerator or adding sodium chloride  Which action will result in denaturing the enzymes present?  Neutralizing ions or warming to the simmer point |
| Which process will slow or stop enzymatic browning in fruits and vegetables?  Dehydration or blanching  An impact of enzymes is to:  Thicken protein mixtures or initiate reactions | Which food color changes is a result of enzymatic browning?  Green to black tea or whit to brown sugar  Which is an example of a natural enzyme source that will weaken a protein gel?  Grapes or pineapple | Which is an example of enzymes making a food available to more people?  Pectic enzymes in fruit juice or lactase in milk  Which is an example of enzymes being used to improve a food’s appearance?  Lactase in milk or pectic enzymes in fruit juice |
| Phytochemicals are a group of compounds produced by plants. Which compound is an example of phytochemicals?  Flavonoid pigments or gums and gels | Carotenes are a group of compounds that are phytochemicals. Which foods are good sources of carotenes?  Onions or collard greens | Lowering the pH will turn purple grape juice red and raising the pH creates a blue tinge. Which additive will help maintain the color of red cabbage when simmered in water?  Distilled water or chopped apples |
| Which food preparation tip has the MOST potential health benefits as a result of increasing levels of phytochemicals in the diet?  Marinate lean meats or add citrus peel to baked goods |  |  |

Remember: to get extra credit on your test, take a screen shot of your grade on the quizlet. It must be 100%. You will get 5% added to your 3.00 test grade.

**Important Vocabulary**

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| Hydrate | Solidification Point | Emulsification |
| Rancidity | Tenderizer | Preservative |
| Caramelization | Crystallization | Gelatinization |
| Stabilizer | Cellulose | Gums |
| Pectins | Fermentation | Carageenan Gum |
| Retrogradation | Texturization | Viscosity |
| Fortified | Binding agent | Denaturing |
| Hydrolization | Coagulation | Texturized protein |
| Fortification | Enzymatic browning | Lactase |
| Blanching | Enzyme | Carotenes |