

★★★ <第38回知的財産翻訳検定試験【第20回和文英訳】> ★★★
《 1 級課題 -化学》

【問 1】

[0003]

For example, in Patent Document 1, after distilling off the alcohol content in the moromi liquid portion of shochu, the distillation residue is further distilled under reduced pressure to produce a concentrate of the moromi liquid.

Likewise, in Patent Document 2, a composition with enhanced tastes derived from roasted coffee beans is produced by a distillation process involving adding water to the roasted coffee beans and heating the resulting mixture for vaporization, and then by use of a refrigerant whose temperature is 5°C or more and at room temperature or less, cooling and concentrating the vapor to collect a fraction rich in a group of substance relatively less volatile than aroma components that are initially distilled out.

In concentration of liquid food by distillation, while it is possible to concentrate by removing low boiling point components through vacuum distillation at a relatively low temperature, a problem arises that the original composition of the above liquid food is changed by the volatilization of flavor components contained therein, resulting in significant deterioration of quality.

[0004]

As a concentration method other than distillation, a concentration method using ultrasonic atomization is proposed in Patent Document 3, but this method has a problem such that flavor and other desired components are removed due to entrainment.

【問 2】

[0013]

[Means for Solving the Problem] As a result of extensive investigations to achieve the above-mentioned objects, (1) the present inventors took note of the fact that in the case of composite oxide catalysts used as desulfurization catalysts and the like, catalyst powder generated as a by-product in the production process of the catalyst is mixed into the raw materials for the

purposes of facilitating the disposal of the powder and reducing material costs, and (2) when the catalyst powder generated in the production process of the hydrodesulfurization catalyst of the above-mentioned prior application was mixed into the gel prior to the catalyst calcination, it was unexpectedly discovered that the LOI could be adjusted extremely easily by simply adjusting the amount of the catalyst powder added.

[0014]

The present invention was made based on this finding, and relates to a method for producing a hydrodesulfurization catalyst made of a composite oxide comprising a metal of Group VIB of the Periodic Table, a metal of Group VIII of the Periodic Table, and aluminum, through mixing in a solvent a mixture of (a) at least one of an aluminum alkoxide, an aluminum chelate compound, and a cyclic aluminum oligomer, (b) at least one metal of Group VIB of the Periodic Table, and (c) at least one metal of Group VIII of the Periodic Table, and drying the active component produced by this mixing to form a gel, which is then calcined, the key aspect of the method being the addition of the calcined hydrodesulfurization catalyst to the gel prior to calcination, followed by the calcination of the gel.

【問 3】

[0017]

FIG. 1 is a set of drawings each showing a structure of a firework fuse wire (hereinafter referred to as "firework fuse") according to an embodiment of the present device. FIG. 1a shows an example of four cotton threads twisted around a core material, FIG. 1b shows an example of three cotton threads twisted around a core material, and FIG. 1c shows an example of two cotton threads twisted around a core material.

[0018]

In FIG. 1a, a structure of four threads 31 to 34 twisted around core material 2, in FIG. 1b, a structure of three cotton threads 31 to 33 twisted around core material 2, and in FIG. 1c, a structure of two cotton threads 31 and 32 twisted around core material 2 are shown.

[0019]

Firework fuse 1 of the embodiment of the present device is installed for improving the ignitability of fuses including a main fuse cord and a

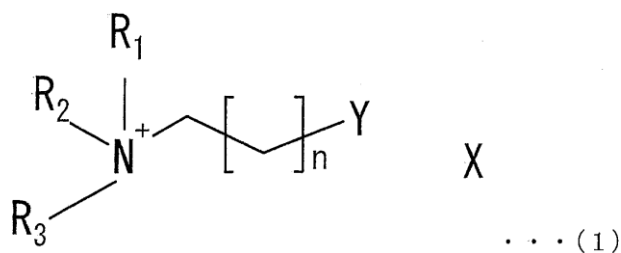
banger fuse cord of an aerial firework.

The firework fuse 1 has core material 2 made of iron wire, and a plurality of threads 31 to 34 twisted around the core material 2.

The Firework fuse 1 has a core material 2, a plurality of threads 31 to 34 twisted around the fuse, and below described explosive powder 4 coated thereon, as explained with reference to FIG 2 in this regard.

【問 4】

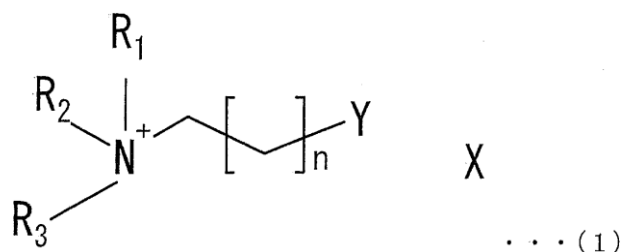
1. A method for destabilizing a G-C base pair and/or stabilizing an A-T base pair (or an A-U base pair) contained in a double-stranded nucleic acid molecule formed when a first nucleic acid molecule and a second nucleic acid molecule hybridize, the method comprising: bringing a first nucleic acid molecule into contact with a second nucleic acid molecule in a solution containing an ionic liquid represented by the following general formula (1):



wherein R_1 to R_3 each independently represents a hydrogen atom or an alkyl group having 1 to 10 carbon atoms which may be substituted, an alkenyl group having 1 to 10 carbon atoms which may be substituted, an aryl group having 6 to 10 carbon atoms which may be substituted, an aralkyl group having 6 to 10 carbon atoms which may be substituted, a heteroaryl group having 4 to 10 carbon atoms which may be substituted, a heteroaralkyl group having 5 to 10 carbon atoms which may be substituted, an alkylene group having 1 to 10 carbon atoms which may be substituted, an arylene group having 6 to 10 carbon atoms which may be substituted, or an arylene-alkylene group having 1 to 10 carbon atoms which may be substituted; n is an integer of 0 to 10; X represents an anion; and Y represents a hydrogen atom or a hydroxyl group.

2. A method for amplifying a nucleic acid molecule by polymerase chain reaction, comprising dissolving a mixture containing at least a template

nucleic acid molecule, a nucleic acid polymerase, at least one pair of primers, or one or more types of nucleotides in a solution containing an ionic liquid represented by the following general formula (1):



wherein R_1 to R_3 each independently represents a hydrogen atom or an alkyl group having 1 to 10 carbon atoms which may be substituted, an alkenyl group having 1 to 10 carbon atoms which may be substituted, an aryl group having 6 to 10 carbon atoms which may be substituted, an aralkyl group having 6 to 10 carbon atoms which may be substituted, a heteroaryl group having 4 to 10 carbon atoms which may be substituted, a heteroaralkyl group having 5 to 10 carbon atoms which may be substituted, an alkylene group having 1 to 10 carbon atoms which may be substituted, an arylene group having 6 to 10 carbon atoms which may be substituted, or an arylene-alkylene group having 1 to 10 carbon atoms which may be substituted; n is an integer of 0 to 10; X represents an anion; and Y represents a hydrogen atom or a hydroxyl group.