

-continued

	0.2% KCl		
	0.9% S-60		
	<u>Brain Heart Infusion Agar</u>		
(A)	3.7% BHI Broth (Difco)		
	1.5% Agar		
(B)	3.7% BHI Broth (Difco)		
	0.2% KCl		
	0.9% S-60		
	<u>Burk's Agar</u>		
(A)		(B)	
0.0584% K <sub>2</sub> HPO <sub>4</sub>	} Same as (A)		
0.0225% KH <sub>2</sub> PO <sub>4</sub>			
0.0174% K <sub>2</sub> SO <sub>4</sub>			
0.0164% MgCl <sub>2</sub> ·6H <sub>2</sub> O			
0.0064% CaCl <sub>2</sub> ·2H <sub>2</sub> O			
0.0005% FeCl <sub>3</sub> ·6H <sub>2</sub> O			
0.00002% Na <sub>2</sub> MoO <sub>4</sub> ·2H <sub>2</sub> O			
0.0116% NaCl			
1.0% Glucose			
1.5% Agar (Difco)			
		0.2% KCl	
		0.9% S-60	

Deionized water was used for all media. The ingredients were combined (except for Burk's) and autoclaved for 15-20 minutes at 121° C. and 15 psi, cooled to 55° C. and poured into sterile petri dishes. The ingredients for Burk's were combined, except for the glucose, which was autoclaved separately, and added to the medium after autoclaving. After these nutrient plates had solidified and allowed to incubate at ambient temperature for 24 hours to check for sterility, they were streaked with

the following fourteen cultures:  
*Agromyces ramosus* ATCC 25173  
*Arthrobacter globiformis* ATCC 8010  
*Aureobasidium pullulans* NRRL YB-3861  
*Azotobacter indicus* var *myxogenes* strain S-7 ATCC 21423  
*Azotobacter vinelandii* ATCC 9047  
*Beijerinckia lactificogenes* ATCC 19361  
*Erwinia cartovora* ATCC 8061  
*Escherichia coli* strain EG-47  
*Klebsiella pneumoniae* strain S-53  
*Nocardia salmonicolor* ATCC 21243 S-60  
*Streptococcus faecalis*  
*Trichoderma longibrachiatum* ATCC 13631  
*Zoogloea ramigera* ATCC 25935

The plates were incubated at 30° C. for 3-5 days and then examined for growth. Good growth was observed for all strains on media made with S-60 and little difference in colonial morphology was noted between media made with S-60 instead of agar. These results indicate that S-60 is an excellent replacement for agar in microbiological media. The gel point for all media containing S-60, except BHI medium and TSA, was 42° C. The gel point for BHI agar and TSA was 52° C. Agar typically gels at 42-44° C.

#### EXAMPLE 7

##### Preparation of Molded Scented Gels Using Deacetylated S-60

(A)	1.50% Polysaccharide S-60
	0.75% Sodium Carbonate
	0.025% Methyl p-hydroxybenzoate
	3.00% Rose fragrance
	4.00% Isopropanol
	2.00% Ethylene glycol
	88.50% Water

The native polysaccharide S-60 is blended with sodium carbonate and preservative and dissolved in water

at 70° C. The solution is then further heated to 90° C. and held at that temperature for ten minutes to deacetylate the polysaccharide. After cooling to 60° C., the fragrance dispersed in the solvents is added and the mixture placed in the usual air freshener plastic molds. When the mixture cools to 38° C., gelation occurred and a firm, self-supporting gel with good fragrance releasing properties results.

(B) A dry deacetylated polysaccharide S-60 is prepared from the fermentate beer by adjusting the pH to 10.0 with dilute sodium hydroxide and heating to 90° C. for fifteen minutes. The solution is neutralized to pH 7 with dilute hydrochloric acid, precipitated in two volumes of isopropanol, dried, and milled. A solid air freshener gel is prepared from the deacetylated product in the following manner: 3.0 grams of the deacetylated polysaccharide S-60 are blended with 1.5 grams potassium chloride and 0.15 grams methyl p-hydroxybenzoate preservative and added to 177 ml water. The solution is heated to 90° C. to dissolve; cooled to 60° C., and a blend of 6.0 grams peppermint oil fragrance, 8.0 grams isopropanol, and 4.0 grams ethylene glycol is added. The solution is placed in plastic molds and cooled to ambient temperature. A strong, brittle gel with heavy mint fragrance forms. The gel can be unmolded easily and retains its shape without sagging.

#### EXAMPLE 8

##### Comparison of Native, Deacetylated, and Clarified and Deacetylated S-60

Three samples of S-60 (native, deacetylated, and deacetylated and clarified) are analyzed. The following data are obtained.

	Native	Deacetylated	Deacetylated and clarified
Uronic acid (%)	11	13	22
Acetyl (%)	3.0	0	0
Neutral sugar (% mol. ratio)			
Glucose	(40)	(49)	(40)
Rhamnose	(60)	(60)	(60)
Proteins	10	17	2
Ash	7.0	8.0	9.5

What is claimed is:

1. A microbiological culture medium which comprises a nutrient and about 0.5-5% deacetylated heteropolysaccharide selected from the group consisting of heteropolysaccharide S-60 which comprises (a) about 50% (wt./wt.) insoluble material of which about 34% (wt./wt.) is protein and (b) about 50% (wt./wt.) carbohydrate which contains about 22-26% (wt./wt.) glucuronic acid, 0% acetyl groups, and the neutral sugars rhamnose and glucose in the approximate molar ratio 3:2, said rhamnose and glucose sugars being primarily 1,4  $\beta$ -linked, and clarified heteropolysaccharide S-60, which comprises no more than about 2% (wt./wt.) protein and carbohydrate, said carbohydrate containing about 22-26% (wt./wt.) glucuronic acid, 0% acetyl groups, and the neutral sugars rhamnose and glucose in the approximate molar ratio 3:2, said rhamnose and glucose sugars being primarily 1,4  $\beta$ -linked, said heteropolysaccharide being further characterized in that it is anionic, and forms brittle, thermoreversible gels.

2. A medium of claim 1 which comprises about 1-2% heteropolysaccharide.

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