



Style:  
**AMERICAN WHEAT (19L/5GAL)**

Source:  
**Biotransformation Series**

Fermented with:  
**LalBrew Pomona™**

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Beer name and/or description: **American Wheat (coriander precursors)**

This recipe is for a modernized American Wheat beer with notes of stonefruit, floral, and citrus overlying a lightly doughy malt base. The use of Indian cordiander seed provides terpene precursors that are biotransformed by the yeast. Zesty yeast character pairs well with the use of hops rich in free aromatic thiols. [Read more](#)

Water					
Mash Water	Temp.	<b>71.5</b>	°C	<b>161</b>	°F
		<b>18.6</b>	L	<b>4.9</b>	gal
Sparge Water	Temp.	<b>78</b>	°C	<b>172</b>	°F
		<b>10.2</b>	L	<b>2.7</b>	gal

Malt			
Malt/adjuncts	Weight		%
	Kg	Lbs	
Pilsner Malt	<b>3.3</b>	<b>7.3</b>	<b>65</b>
Wheat Malt	<b>1.6</b>	<b>3.5</b>	<b>30</b>
Munich Malt	<b>0.3</b>	<b>0.7</b>	<b>5</b>
<b>Total</b>	<b>5.2</b>	<b>11.5</b>	<b>100</b>
Mash & Sparge			
	Temperature		Time (min)
	°C	°F	
Mash Step 1	<b>66</b>	<b>151</b>	<b>60</b>
Mash Step 2			
Mash Step 3			
Mash Step 4			

IBU: 21 | Color (SRM): 4.1 | % ABV: 5.3

Boil					
Wort	SG	L	gal	pH	
Pre-boil	<b>1.045</b>	<b>28.1</b>	<b>7.4</b>		
Post-boil	<b>1.052</b>	<b>24.4</b>	<b>6.4</b>		
<b>Total Boil Time</b>	<b>75</b>		minutes		
Hops					
Hop Variety	%AA	Weight		Kettle addition	Dry hopping
		g	oz	Boil Time (min)	Fermentation day
Crystal	<b>4.3</b>	<b>45</b>	<b>1.6</b>	<b>60</b>	
Crystal	<b>4.3</b>	<b>45</b>	<b>1.6</b>	<b>20</b>	
Crystal	<b>4.3</b>	<b>45</b>	<b>1.6</b>	<b>10</b>	
Hallertau Blanc	<b>10.0</b>	<b>42</b>	<b>1.5</b>	<b>WP</b>	
Citra	<b>11.0</b>	<b>42</b>	<b>1.5</b>	<b>WP</b>	
Crystal	<b>4.3</b>	<b>42</b>	<b>1.5</b>	<b>WP</b>	
<b>Total</b>	<b>38.2</b>	<b>261</b>	<b>9.3</b>		

Fermentation			
Yeast Strain	<b>LalBrew Pomona™</b>		
Pitch Rate	<b>0.58</b>	g/L	<b>1x11g sachet</b>
Temperature	<b>21</b>	°C	°F
	SG		Plato
OG	<b>1.052</b>	<b>12.9</b>	
FG	<b>1.011</b>	<b>2.8</b>	
Attenuation	<b>78</b>	%	

**NOTES**

Other ingredients	Quantity	Units (L, g, etc)	Addition Point
<b>Indian Cordiander (crushed)</b>	<b>15</b>	<b>g</b>	<b>10 min boil</b>

Long boil of 75 minutes for DMS reduction.  
Cool the wort to 80°C for whirlpool additions (20 min)  
Increase temp to 23°C for diacetyl rest when attenuation reaches 1.029-1.034





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## LalBrew Pomona™ Biotransformation Recipe Series

### Lallemmand/Escarpments Labs Collab 4: American Wheat Ale

This recipe is for a modernized American Wheat beer – the aim is for a combination of stonefruit, floral, and citrusy character overlying a "light malt" base.

We achieve this outcome by a precise combination of zesty yeast character, a counterpoint of juicy high free thiol hop, and high free terpene Indian coriander seed. With no dry hop, the flavor profile from fermentation with LalBrew Pomona™ takes the lead, creating a crisp, sessionable, and elegant modern wheat beer.

We will achieve this by a combination of methods:

- › **Addition of Indian coriander in the boil** for maximal extraction of terpene precursors such as linalool (lavender, spicy) and geraniol.
- › **Conversion of geraniol to beta-citronellol** (citrus) during fermentation by LalBrew Pomona™
- › **Warmer fermentation temperature with LalBrew Pomona™** to promote ester profile of stonefruit and citrus.

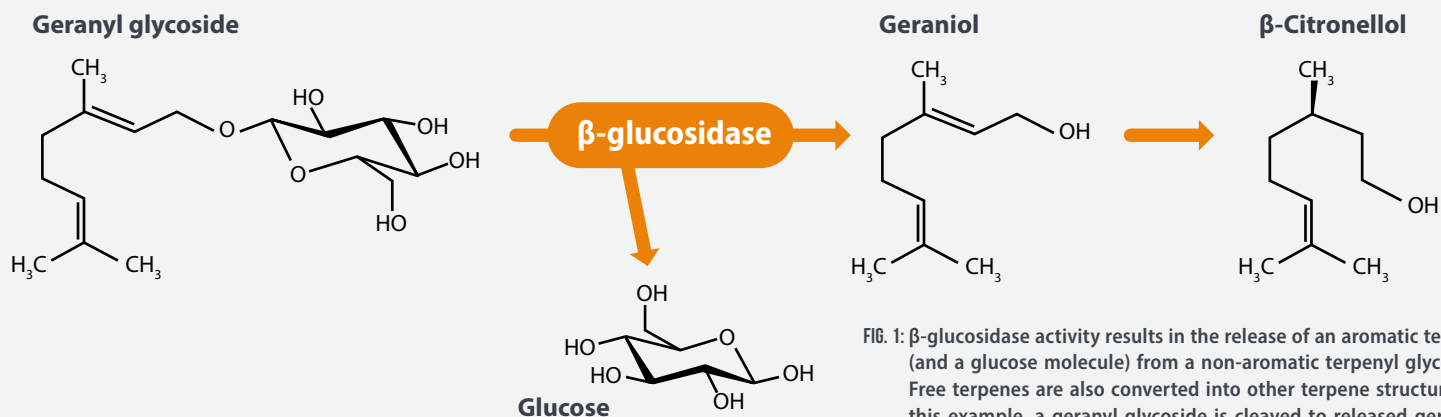


FIG. 1: β-glucosidase activity results in the release of an aromatic terpene (and a glucose molecule) from a non-aromatic terpenyl glycoside. Free terpenes are also converted into other terpene structures. In this example, a geranyl glycoside is cleaved to released geraniol, which is then converted into β-citronellol.