



Style:  
**TRIPLE IPA (19L/5GAL)**

Source:  
**Biotransformation Series**

Fermented with:  
**LalBrew Pomona™**

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Beer name and/or description: **Peaches & Cream TIPA**

IBU: **30** | Color (SRM): **3.0** | % ABV: **10.5**

This excessive recipe shows how LalBrew Pomona™ thrives in high-ABV brews. Mosaic and Chinook hops rich in free geraniol are biotransformed into citrusy citronellol. A heavy dry hop with Citra and Sabro hops provide tropical and coconut aromas that complement the fruity esters from the yeast. [Read more](#)

**Water**

Mash Water	Temp.	70.5	°C	159	°F
		30	L	7.9	gal
Sparge Water	Temp.	76	°C	169	°F
		5	L	1.3	gal

**Malt**

Malt/adjuncts	Weight		%
	Kg	Lbs	
Pale Ale Malt	7.3	16.1	80
Flaked Oats	1.0	2.2	10
Carapils (Dextrine Malt)	0.45	1.0	5
Dextrose	0.45	1.0	5
<b>Total</b>	<b>9.2</b>	<b>20.3</b>	<b>100</b>

**Mash & Sparge**

	Temperature		Time (min)
	°C	°F	
Mash Step 1	65	149	60
Mash Step 2			
Mash Step 3			
Mash Step 4			

**NOTES**

Other ingredients	Quantity	Units (L, g, etc)	Addition Point
Servomyces	1	capsule	10 min boil

**Boil**

Wort	SG	L	gal	pH
Pre-boil	1.089	27.7		
Post-boil	1.104	23.6		
<b>Total Boil Time</b>	<b>75</b>	<b>minutes</b>		

**Hops**

Hop Variety	%AA	Weight		Kettle addition Boil Time (min)	Dry hopping Fermentation day
		g	oz		
CTZ	15.5	56	2	60	
Chinook	13	88	3.1	WP	
Mosaic	12.5	88	3.1	WP	
Sabro	14	152	5.4		4
Citra	11	152	5.4		4
<b>Total</b>	<b>66</b>	<b>536</b>	<b>19</b>		

**Fermentation**

Yeast Strain	LalBrew Pomona™			
Pitch Rate	1.16	g/L	2x11g sachets	
Temperature	20	°C	68	°F
	SG		Plato	
OG	1.104		24.6	
FG	1.024		6.1	
Attenuation	75	%		

Long boil of 75 minutes for DMS reduction.  
Cool the wort to 80°C for whirlpool additions (20 min)





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## LalBrew Pomona™ Biotransformation Recipe Series

### Lallemmand/Escarpments Labs Collab 6: Peaches & Cream Triple IPA

This admittedly excessive recipe shows off how LalBrew Pomona™ performs in high-ABV brewing as well as its compatibility with modern aroma hops such as Sabro. The fruity hop biotransformation capability of LalBrew Pomona™ perfectly complements the coconut-like note that modern hops (such as Sabro) with *Humulus Neomexicanus* genetics contribute to beer.

Here, we start with a complex fruity hop foundation rich in compounds that can be biotransformed by Pomona, combining Mosaic and Chinook which are both rich in terpenes such as geraniol that Pomona will transform into citronellol (citrus). Then, we layer the aroma with a big dry hop of Sabro and Citra, adding tropical fruit and coconut top notes, creating a big, juicy, tropical triple IPA without any lactose required.

We will achieve this by a combination of methods:

- › **Lower-temperature (80°C) whirlpool addition of Chinook and Mosaic hops** to maximize the extraction of terpene precursors such as free geraniol.
- › **Conversion of geraniol to beta-citronellol** (citrus) by fermentation with LalBrew Pomona™
- › **Fermentation with LalBrew Pomona™ for strong performance** in high ABV conditions and higher attenuation than other hazy IPA strains.
- › **Late dry hop addition of Citra and Sabro provide a boost** of free terpenes, thiols, and lactones that contribute to tropical character.

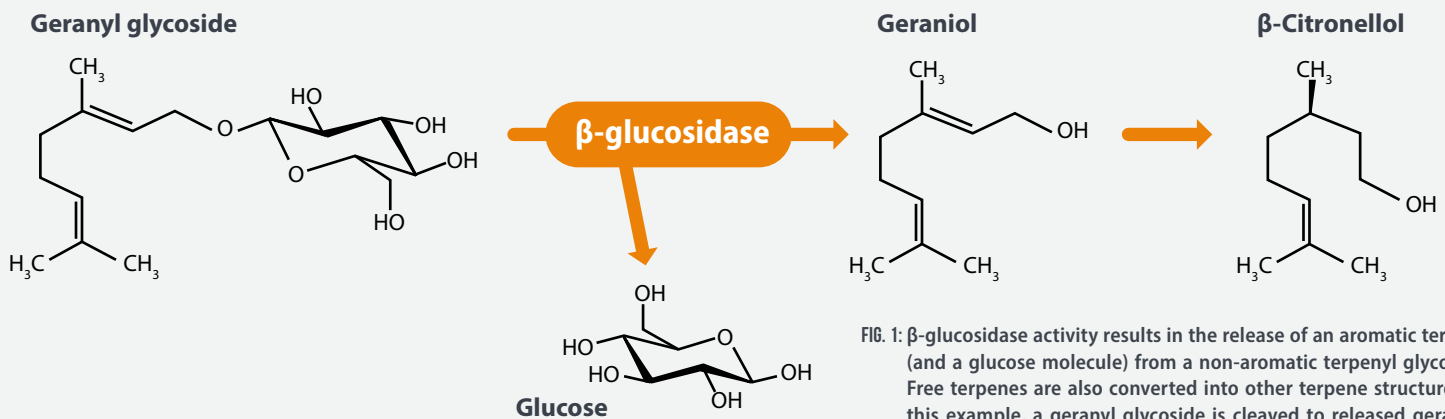


FIG. 1:  $\beta$ -glucosidase activity results in the release of an aromatic terpene (and a glucose molecule) from a non-aromatic terpenyl glycoside. Free terpenes are also converted into other terpene structures. In this example, a geranyl glycoside is cleaved to released geraniol, which is then converted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

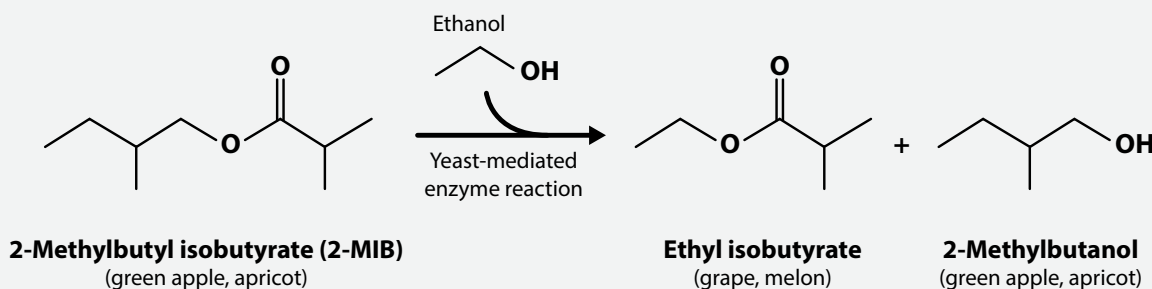


FIG. 2: Transesterification of hop-derived esters such as 2-MIB through yeast-mediated enzyme reactions can increase concentrations of ethyl esters such as ethyl isobutyrate.