

## BRETT APA v4 #55

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- Gravity **12.9 BLG**
- ABV **5.2 %**
- IBU **42**
- SRM **4.2**
- Style **American Pale Ale**

### Batch size

- Expected quantity of finished beer **22 liter(s)**
- Trub loss **4 %**
- Size with trub loss **23.8 liter(s)**
- Boil time **60 min**
- Evaporation rate **12 %/h**
- Boil size **27.9 liter(s)**

### Mash information

- Mash efficiency **82.2 %**
- Liquor-to-grist ratio **3.98 liter(s) / kg**
- Mash size **20 liter(s)**
- Total mash volume **25.1 liter(s)**

### Steps

- Temp **68 C**, Time **60 min**
- Temp **76 C**, Time **10 min**

### Mash step by step

- Heat up **20 liter(s)** of strike water to **74C**
- Add grains
- Keep mash **60 min** at **68C**
- Keep mash **10 min** at **76C**
- Sparge using **12.9 liter(s)** of **76C** water or to achieve **27.9 liter(s)** of wort

### Fermentables

Type	Name	Amount	Yield	EBC
Grain	Bestmalz - pale ale	2.15 kg (42.7%)	80.5 %	6
Grain	Viking - pale ale	1.45 kg (28.8%)	79 %	6
Grain	Bestmalz - pszeniczny	0.84 kg (16.7%)	82 %	4.5
Grain	Płatki pszenne	0.397 kg (7.9%)	77 %	4
Grain	Bestmalz - Caramelpils	0.2 kg (4%)	75 %	5

### Hops

Use for	Name	Amount	Time	Alpha acid
Boil	Warrior	8 g	60 min	14.7 %
Aroma (end of boil)	Columbus	10 g	20 min	12.5 %
Aroma (end of boil)	Topaz	10 g	15 min	15.5 %
Aroma (end of boil)	Fuggles	20 g	10 min	4.5 %
Aroma (end of boil)	Simcoe	20 g	5 min	13.1 %
Aroma (end of boil)	Galaxy	15.66 g	5 min	14.5 %
Aroma (end of boil)	Citra	30 g	1 min	13.6 %
Dry Hop	Mosaic	27.7 g	4 day(s)	12 %
Dry Hop	Centennial	30 g	4 day(s)	9.4 %

Dry Hop	Citra	30.6 g	4 day(s)	13.6 %
Dry Hop	Fuggles	30.6 g	4 day(s)	4.5 %

## Yeasts

Name	Type	Form	Amount	Laboratory
Amalgamation Brett Super Blend	Ale	Slant	150 ml	White Labs
starter 7-dniowy 1.1 L				

## Extras

Type	Name	Amount	Use for	Time
Water Agent	Gips	3 g	Mash	---
Fining	irish moss	3 g	Boil	5 min
Water Agent	kwask mlekowy 80% [ml]	5.34 g	Mash	---
Water Agent	chlorek wapnia [ml]	3.44 g	Mash	---
Water Agent	sól epsom	2 g	Mash	---

## Notes

- czyszczenie zapasów chmieli (2016) i rozruszanie 3-m gęstwy Amalgamation YB  
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