

## DDH APA

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- Gravity **13.1 BLG**
- ABV **5.3 %**
- IBU **19**
- SRM **13.2**
- Style **American IPA**

### Batch size

- Expected quantity of finished beer **20 liter(s)**
- Trub loss **5 %**
- Size with trub loss **21 liter(s)**
- Boil time **60 min**
- Evaporation rate **10 %/h**
- Boil size **25.3 liter(s)**

### Mash information

- Mash efficiency **80 %**
- Liquor-to-grist ratio **3.5 liter(s) / kg**
- Mash size **17.5 liter(s)**
- Total mash volume **22.5 liter(s)**

### Steps

- Temp **61 C**, Time **10 min**
- Temp **69 C**, Time **50 min**
- Temp **78 C**, Time **15 min**

### Mash step by step

- Heat up **17.5 liter(s)** of strike water to **66.9C**
- Add grains
- Keep mash **10 min** at **61C**
- Keep mash **50 min** at **69C**
- Keep mash **15 min** at **78C**
- Sparge using **12.8 liter(s)** of **76C** water or to achieve **25.3 liter(s)** of wort

### Fermentables

Type	Name	Amount	Yield	EBC
Grain	Viking Pale Ale malt	4 kg (80%)	80 %	5
Grain	pszeniczny	1 kg (20%)	75 %	150

### Hops

Use for	Name	Amount	Time	Alpha acid
Boil	Columbus/Tomahawk/Zeus	5 g	60 min	15.5 %
Boil	callista	50 g	15 min	3.9 %
Dry Hop	Lemon drop	100 g	4 day(s)	4.6 %
Dry Hop	Columbus/Tomahawk/Zeus	20 g	4 day(s)	15.5 %
Dry Hop	Lemon drop	50 g	7 day(s)	4.6 %

### Yeasts

Name	Type	Form	Amount	Laboratory
Mangrove Jack's m12	Wheat	Dry	11 g	Mangrove Jack's

### Extras

Type	Name	Amount	Use for	Time
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Spice	trawa cytrynowa	20 g	Boil	15 min
Spice	trawa cytrynowa	20 g	Secondary	5 day(s)

### Notes

- Lemon drop 50g na fermentacje burzliwą na 7 dni, reszta na zimno na 4 dni na cichą.  
*Dec 14, 2020, 2:22 PM*