

## DDH IPA PK 3

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- Gravity **12.6 BLG**
- ABV **5.1 %**
- IBU **29**
- SRM **4.3**
- Style **American Pale Ale**

### Batch size

- Expected quantity of finished beer **18 liter(s)**
- Trub loss **5 %**
- Size with trub loss **18.9 liter(s)**
- Boil time **60 min**
- Evaporation rate **20 %/h**
- Boil size **24.8 liter(s)**

### Mash information

- Mash efficiency **75 %**
- Liquor-to-grist ratio **3.5 liter(s) / kg**
- Mash size **15.8 liter(s)**
- Total mash volume **20.3 liter(s)**

### Steps

- Temp **64 C**, Time **60 min**
- Temp **72 C**, Time **15 min**
- Temp **76 C**, Time **5 min**

### Mash step by step

- Heat up **15.8 liter(s)** of strike water to **70.3C**
- Add grains
- Keep mash **60 min** at **64C**
- Keep mash **15 min** at **72C**
- Keep mash **5 min** at **76C**
- Sparge using **13.5 liter(s)** of **76C** water or to achieve **24.8 liter(s)** of wort

### Fermentables

Type	Name	Amount	Yield	EBC
Grain	Pilsner Malz Best	3 kg (66.7%)	81 %	3
Grain	Pale Ale Best	0.8 kg (17.8%)	80 %	6
Grain	Weizenmalz Best	0.2 kg (4.4%)	82 %	4
Grain	Cara-Pils/Dextrine	0.2 kg (4.4%)	72 %	4
Grain	Carahell Best	0.3 kg (6.7%)	75 %	30

### Hops

Use for	Name	Amount	Time	Alpha acid
Whirlpool	Centennial	10 g	30 min	9.5 %
Whirlpool	Citra	10 g	30 min	13.6 %
Whirlpool	El Dorado	10 g	30 min	11.6 %
Whirlpool	Galaxy	10 g	30 min	15 %
Whirlpool	Simcoe	10 g	30 min	12.6 %
Dry Hop	Amarillo	30 g	2 day(s)	8.7 %
Dry Hop	Citra	30 g	2 day(s)	13.6 %
Dry Hop	Centennial	30 g	2 day(s)	9.5 %
Dry Hop	El Dorado	30 g	2 day(s)	11.6 %

Dry Hop	Galaxy	30 g	2 day(s)	15 %
Dry Hop	Simcoe	30 g	2 day(s)	12.4 %
Dry Hop	Cascade	20 g	2 day(s)	5.8 %
Dry Hop	Monroe	15 g	2 day(s)	3.5 %

### Yeasts

Name	Type	Form	Amount	Laboratory
1056	Ale	Slant	100 ml	Wyeast Labs

### Extras

Type	Name	Amount	Use for	Time
Water Agent	gips piwowarski	5 g	Mash	60 min

### Notes

- 15 litrow wody destylowanej  
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