

# DAPA

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- Gravity **14 BLG**
- ABV **5.8 %**
- IBU **77**
- SRM **8.6**
- Style **American Pale Ale**

## Batch size

- Expected quantity of finished beer **32 liter(s)**
- Trub loss **5 %**
- Size with trub loss **33.6 liter(s)**
- Boil time **60 min**
- Evaporation rate **10 %/h**
- Boil size **40.5 liter(s)**

## Mash information

- Mash efficiency **80 %**
- Liquor-to-grist ratio **3 liter(s) / kg**
- Mash size **24.2 liter(s)**
- Total mash volume **32.2 liter(s)**

## Steps

- Temp **63 C**, Time **30 min**
- Temp **72 C**, Time **60 min**
- Temp **78 C**, Time **10 min**

## Mash step by step

- Heat up **24.2 liter(s)** of strike water to **70.2C**
- Add grains
- Keep mash **30 min** at **63C**
- Keep mash **60 min** at **72C**
- Keep mash **10 min** at **78C**
- Sparge using **24.4 liter(s)** of **76C** water or to achieve **40.5 liter(s)** of wort

## Fermentables

Type	Name	Amount	Yield	EBC
Grain	Viking Pale Ale malt	4.5 kg (55.9%)	85 %	5
Grain	Viking Pilsner Malt	3.05 kg (37.9%)	85 %	4
Grain	Strzegom Karmel 300	0.15 kg (1.9%)	70 %	300
Grain	Strzegom Czekoladowy jasny	0.15 kg (1.9%)	68 %	400
Grain	Płatki owsiane	0.2 kg (2.5%)	85 %	3

## Hops

Use for	Name	Amount	Time	Alpha acid
Boil	Marynka	30 g	60 min	10 %
Boil	Columbus/Tomahawk/Zeus	30 g	60 min	15.5 %
Boil	Columbus/Tomahawk/Zeus	30 g	20 min	15.5 %
Aroma (end of boil)	Columbus/Tomahawk/Zeus	20 g	5 min	15.5 %
Aroma (end of boil)	Citra	25 g	5 min	12 %
Aroma (end of boil)	Simcoe	15 g	1 min	13.2 %
Aroma (end of boil)	Cascade	20 g	1 min	6 %
Dry Hop	Cascade	55 g	6 day(s)	6 %

Dry Hop	Amarillo	45 g	6 day(s)	9.5 %
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## Yeasts

Name	Type	Form	Amount	Laboratory
Safale US-05	Ale	Slant	200 ml	---