

# Aparillo

- Gravity **12.9 BLG**
- ABV **5.2 %**
- IBU **38**
- SRM **12.4**
- Style **American Pale Ale**

## Batch size

- Expected quantity of finished beer **10 liter(s)**
- Trub loss **5 %**
- Size with trub loss **10.5 liter(s)**
- Boil time **65 min**
- Evaporation rate **10 %/h**
- Boil size **12.7 liter(s)**

## Mash information

- Mash efficiency **75 %**
- Liquor-to-grist ratio **3 liter(s) / kg**
- Mash size **0.8 liter(s)**
- Total mash volume **1.1 liter(s)**

## Steps

- Temp **70 C**, Time **30 min**

## Mash step by step

- Heat up **0.8 liter(s)** of strike water to **78.4C**
- Add grains
- Keep mash **30 min** at **70C**
- Sparge using **12.2 liter(s)** of **76C** water or to achieve **12.7 liter(s)** of wort

## Fermentables

Type	Name	Amount	Yield	EBC
Liquid Extract	Bruntal ekstrakt słodowy Pale Ale	1.7 kg (86.3%)	80 %	35
Grain	Strzegom Karmel 150	0.12 kg (6.1%)	75 %	150
namaczanie				
Grain	Weyermann - Carapils	0.15 kg (7.6%)	78 %	4

## Hops

Use for	Name	Amount	Time	Alpha acid
Boil	Chinook	5 g	30 min	13 %
Boil	Chinook	8 g	15 min	13 %
Aroma (end of boil)	Amarillo	20 g	10 min	9.5 %
Whirlpool	Amarillo	30 g	1 min	9.5 %

## Yeasts

Name	Type	Form	Amount	Laboratory
Safale US-05	Ale	Dry	11 g	Fermentis

## Extras

Type	Name	Amount	Use for	Time
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Water Agent	pirosiarczyn potasu	1 g	Boil	65 min
dodaj do wody zanim się zagotuje				
Water Agent	gips piwowarski	2 g	Boil	65 min
Water Agent	chlerek wapnia 33%	2.5 g	Boil	65 min
Fining	whirflock t	1 g	Boil	10 min

## Notes

- Słody 45 zł + 17zł chmiel + 12zł drożdże = 74zł / 20 = 3,7zł  
Obliczenie chlorku wapnia płynnego: 1gram suchego = 1 / 0.43 = 2,32 ml  
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