

# Apa z malinami

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- Gravity **12.4 BLG**
- ABV **5 %**
- IBU **15**
- SRM **4.4**
- Style **American Pale Ale**

## Batch size

- Expected quantity of finished beer **550 liter(s)**
- Trub loss **2 %**
- Size with trub loss **561 liter(s)**
- Boil time **60 min**
- Evaporation rate **5 %/h**
- Boil size **617.9 liter(s)**

## Mash information

- Mash efficiency **80 %**
- Liquor-to-grist ratio **3 liter(s) / kg**
- Mash size **352.5 liter(s)**
- Total mash volume **470 liter(s)**

## Steps

- Temp **62 C**, Time **40 min**
- Temp **78 C**, Time **10 min**
- Temp **72 C**, Time **20 min**

## Mash step by step

- Heat up **352.5 liter(s)** of strike water to **69C**
- Add grains
- Keep mash **40 min** at **62C**
- Keep mash **20 min** at **72C**
- Keep mash **10 min** at **78C**
- Sparge using **382.9 liter(s)** of **76C** water or to achieve **617.9 liter(s)** of wort

## Fermentables

Type	Name	Amount	Yield	EBC
Grain	Strzegom Pilzneński	40 kg (34%)	80 %	4
Grain	Słód pszeniczny	15 kg (12.8%)	82 %	5
Grain	Monachijski	12.5 kg (10.6%)	80 %	16
Grain	Pale Malt (2 Row) Bel	50 kg (42.6%)	80 %	6

## Hops

Use for	Name	Amount	Time	Alpha acid
Boil	Premiant	200 g	60 min	8 %
Boil	Premiant	300 g	30 min	8 %

## Yeasts

Name	Type	Form	Amount	Laboratory
Us-05	Ale	Dry	500 g	Fermentis