

# Morelowe sour ale

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- Gravity **12.1 BLG**
- ABV **4.9 %**
- IBU **28**
- SRM **4.2**
- Style **American Pale Ale**

## Batch size

- Expected quantity of finished beer **22 liter(s)**
- Trub loss **5 %**
- Size with trub loss **24.2 liter(s)**
- Boil time **40 min**
- Evaporation rate **10 %/h**
- Boil size **28.2 liter(s)**

## Mash information

- Mash efficiency **70 %**
- Liquor-to-grist ratio **3 liter(s) / kg**
- Mash size **18 liter(s)**
- Total mash volume **24 liter(s)**

## Steps

- Temp **66 C**, Time **60 min**
- Temp **72 C**, Time **1 min**

## Mash step by step

- Heat up **18 liter(s)** of strike water to **73.7C**
- Add grains
- Keep mash **60 min** at **66C**
- Keep mash **1 min** at **72C**
- Sparge using **16.2 liter(s)** of **76C** water or to achieve **28.2 liter(s)** of wort

## Fermentables

Type	Name	Amount	Yield	EBC
Grain	Pilzneński	3.7 kg (61.7%)	81 %	4
Grain	Pszeniczny	1 kg (16.7%)	85 %	4
Grain	Płatki owsiane	0.5 kg (8.3%)	60 %	3
Grain	Płatki pszeniczne	0.3 kg (5%)	60 %	3
Grain	Monachijski	0.5 kg (8.3%)	80 %	16

## Hops

Use for	Name	Amount	Time	Alpha acid
Boil	lunga	30 g	40 min	11 %

## Yeasts

Name	Type	Form	Amount	Laboratory
Lallemand - WildBrew Philly Sour	Ale	Dry	11 g	Lallemand