

# Morska bryza

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- Gravity **15.4 BLG**
- ABV **6.5 %**
- IBU **66**
- SRM **6.2**
- Style **American IPA**

## Batch size

- Expected quantity of finished beer **30 liter(s)**
- Trub loss **5 %**
- Size with trub loss **31.5 liter(s)**
- Boil time **70 min**
- Evaporation rate **10 %/h**
- Boil size **38.5 liter(s)**

## Mash information

- Mash efficiency **75 %**
- Liquor-to-grist ratio **3 liter(s) / kg**
- Mash size **27.8 liter(s)**
- Total mash volume **37 liter(s)**

## Steps

- Temp **52 C**, Time **10 min**
- Temp **63 C**, Time **30 min**
- Temp **72 C**, Time **30 min**
- Temp **78 C**, Time **10 min**

## Mash step by step

- Heat up **27.8 liter(s)** of strike water to **57.3C**
- Add grains
- Keep mash **10 min** at **52C**
- Keep mash **30 min** at **63C**
- Keep mash **30 min** at **72C**
- Keep mash **10 min** at **78C**
- Sparge using **20 liter(s)** of **76C** water or to achieve **38.5 liter(s)** of wort

## Fermentables

Type	Name	Amount	Yield	EBC
Grain	Viking Pale Ale malt	5 kg (54.1%)	80 %	5
Grain	Strzegom Monachijski typ I	2 kg (21.6%)	79 %	16
Grain	Strzegom Pszeniczny	1 kg (10.8%)	81 %	6
Grain	Karmelowy Jasny 30EBC	0.25 kg (2.7%)	75 %	30
Grain	Płatki owsiane	1 kg (10.8%)	85 %	3

## Hops

Use for	Name	Amount	Time	Alpha acid
Boil	Tomahawk	50 g	60 min	14.3 %
Boil	Centennial	50 g	20 min	9.7 %
Whirlpool	Cascade	50 g	---	6.9 %
Whirlpool	Spalter select	100 g	---	4.7 %
Dry Hop	Mandarina Bavaria	9.8 g	3 day(s)	9.8 %

## Yeasts

<b>Name</b>	<b>Type</b>	<b>Form</b>	<b>Amount</b>	<b>Laboratory</b>
Safale US-05	Ale	Dry	11.5 g	Fermentis