

# Spirala Ulama

- Gravity **15 BLG**
- ABV **6.2 %**
- IBU **56**
- SRM **9.2**
- Style **American IPA**

## Batch size

- Expected quantity of finished beer **14 liter(s)**
- Trub loss **5 %**
- Size with trub loss **15.4 liter(s)**
- Boil time **60 min**
- Evaporation rate **10 %/h**
- Boil size **18.5 liter(s)**

## Mash information

- Mash efficiency **75 %**
- Liquor-to-grist ratio **3 liter(s) / kg**
- Mash size **13.5 liter(s)**
- Total mash volume **18 liter(s)**

## Steps

- Temp **65 C**, Time **60 min**
- Temp **79 C**, Time **0 min**

## Mash step by step

- Heat up **13.5 liter(s)** of strike water to **72.5C**
- Add grains
- Keep mash **60 min** at **65C**
- Keep mash **0 min** at **79C**
- Sparge using **9.5 liter(s)** of **76C** water or to achieve **18.5 liter(s)** of wort

## Fermentables

Type	Name	Amount	Yield	EBC
Grain	Pale Ale Viking Malt	4 kg (88.9%)	79 %	6
Grain	Caramunich typ I	0.5 kg (11.1%)	73 %	90

## Hops

Use for	Name	Amount	Time	Alpha acid
Boil	Columbus	10 g	60 min	15.5 %
Boil	Chinook	15 g	60 min	11.1 %
Whirlpool	Columbus	20 g	10 min	15.5 %
Whirlpool	Chinook	15 g	10 min	11.1 %
Dry Hop	Columbus	70 g	3 day(s)	15.5 %
Dry Hop	Chinook	70 g	3 day(s)	11.1 %
Dry Hop	Cascade	70 g	3 day(s)	6.9 %

## Yeasts

Name	Type	Form	Amount	Laboratory
WLP090 - San Diego Super Yeast	Ale	Slant	300 ml	White Labs