

## Milk APA

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- Gravity **14 BLG**
- ABV **5.8 %**
- IBU **20**
- SRM **3.3**
- Style **American Pale Ale**

### Batch size

- Expected quantity of finished beer **3050 liter(s)**
- Trub loss **0 %**
- Size with trub loss **3050 liter(s)**
- Boil time **60 min**
- Evaporation rate **5.556 %/h**
- Boil size **3219.5 liter(s)**

### Mash information

- Mash efficiency **91 %**
- Liquor-to-grist ratio **3 liter(s) / kg**
- Mash size **1500 liter(s)**
- Total mash volume **2000 liter(s)**

### Steps

- Temp **62 C**, Time **1 min**
- Temp **66 C**, Time **30 min**
- Temp **72 C**, Time **30 min**
- Temp **78 C**, Time **1 min**

### Mash step by step

- Heat up **1500 liter(s)** of strike water to **69C**
- Add grains
- Keep mash **1 min** at **62C**
- Keep mash **30 min** at **66C**
- Keep mash **30 min** at **72C**
- Keep mash **1 min** at **78C**
- Sparge using **2219.5 liter(s)** of **76C** water or to achieve **3219.5 liter(s)** of wort

### Fermentables

Type	Name	Amount	Yield	EBC
Grain	Pilzneński	325 kg (55.1%)	81 %	4
Grain	Monachijski	25 kg (4.2%)	80 %	16
Grain	Pszeniczny	150 kg (25.4%)	85 %	4
Sugar	Milk Sugar (Lactose)	90 kg (15.3%)	76.1 %	0

### Hops

Use for	Name	Amount	Time	Alpha acid
Boil	Columbus/Tomahawk/Zeus	1500 g	60 min	15.5 %
Boil	Amarillo	1500 g	5 min	9.5 %

### Yeasts

Name	Type	Form	Amount	Laboratory
S-05	Ale	Dry	4000 g	Fermentis

### Notes

- Rozlewane na 3 warki i dodawana pulpa  
*Apr 29, 2021, 1:44 PM*