

**Aufgabe 9.26: Inventory valuation**

BILK MART is a Chinese grocery store in the suburbs of Osnabrück. It sells instant noodles (packages), chop sticks (pairs of = 1 unit) and sweet/sour soups (per can). At the beginning of the accounting period 20X5 the stock count reveals 455 packages of instant noodles at 1.20 EUR/p purchase cost (net amount), 1,400 pairs of chop sticks at 0.27 EUR/u and 1,320 cans of sweet/sour soup at 0.90 EUR/can. All amounts are free of VAT.

BILK MART AG sells its goods to normal customers at 200 % of the purchase costs. I.e. the instant noodles are sold at a gross selling price of 2.40 EUR/p. However, the customer SPICY DRAGON (which is a restaurant) enjoys the privilege of a 35 % discount on all products.

In 20X5 the purchase prices of all products increases by 10 %. BILK MART AG purchases on 1.01.20X5 and 1.07.20X5 5,000 packages of instant noodles each (annual purchase amount = 10,000 packages), on 1.01.20X5 6,000 pairs of chop sticks and on 1.07.20X5 an amount of 2,000 cans of sweet/sour soup.

BILK MART AG applies a perpetual inventory system and follows the permanent (= half year accurate) weighted average method for inventory movements.

The sales amount to the figures provided by the table below:

period/customer	instant noodles	chop sticks	sweet/sour soup
I ... VI/20X5 / common clients	3257	198	253
I ... VI/20X5 / SPICY DRAGON	1500	2000	800
VII ... XII/20X5 / common clients	2961	523	124
VII ... XII/20X5 / SPICY DRAGON	2000	2500	900

**Exhibit 1:** Sales figures

Some customers (classified as common clients) return in total 108 cans of soup bought in June 20X5 because of the contents is too spicy. BILK MART AG refunds them the paid price and puts the soup on stock again.

**Required: Prepare a Trading Account for BILK MART AG for the accounting period 20X5. It is recommended recording the business transactions in accounts. Consider VAT at a VAT rate of 20%. Determine the closing stock for each good group.**

BILK MART AG ist ein Lebensmittelhändler in einem Osnabrücker Vorort. Das Unternehmen verkauft Instantnudeln (Packungen), Stäbchen (1 Paar = 1 Einheit) und Süß/Sauersuppen (Dosen). Zu Beginn der Abrechnungsperiode 20X5 ergibt die Inventur 455 Packungen Instantnudeln zu einem Wert von 1,20 EUR/P (netto), 1.400 Stäbchen (Paare) zu 0,27 EUR/Einheit und 1.320 Süß/Sauersuppen zu 0,90 EUR/Dose. Alle Beträge enthalten keine Umsatzsteuer.

BILK MART AG verkauft seine Ware an normale Kunden zu 200 % der Einkaufskosten. Zum Beispiel werden die Instantnudeln zu 2,40 EUR/P verkauft. Dennoch erhält der Kunde SCHARFER DRACHE (der ein Restaurant ist) immer einen Rabatt von 35 % auf alle Produkte.

In 20X5 steigen alle Einkaufspreise aller Produkte um 10 % an. BILK MART AG kauft am 1.01.20X5 und 1.07.20X5 jeweils 5.000 Packungen Instantnudeln (im Jahr 10.000 Packungen), am 1.01.20X5 6.000 Stäbchen (Paare) und am 1.07.20X5 2.000 Dosen Süß/Sauersuppe.

BILK MART wendet ein permanentes Lagerhaltungssystem an und folgt einer halbjahresgenauen gewichteten Durchschnittsbewertung für Bestandsbewegungen.

Die Verkaufszahlen gehen aus der Tabelle hervor:

Periode/Kunde	Instantnudeln	Stäbchen	Süß/Sauersuppe
I ... VI/20X5 / normale Kunden	3257	198	253
I ... VI/20X5 / SCHARFER DRACHE	1500	2000	800
VII ... XII/20X5 / normale Kunden	2961	523	124
VII ... XII/20X5 / SCHARFER DRACHE	2000	2500	900

**Exhibit 1:** Verkaufszahlen

Einige als normale Kunden eingestufte Kunden bringen in Summe 108 Dosen mit Suppe, die sie im Juni 20X5 gekauft haben zurück, weil sie zu scharf sind. BILK MART AG erstattet den bezahlten Preis und die Suppen auf das Lager zurück.

**Gefordert:** Erstellen Sie ein Trading Account für die BILK MART AG für die Abrechnungsperiode 20X5. Es ist empfohlen die Geschäftsvorfälle in Konten zu buchen. Berücksichtigen Sie die Umsatzsteuer zu einem USt-Satz von 20%. Bestimmen Sie den Schlußbestand für jede Warengruppe.

### Solution:

It is appropriate to run 3 inventory accounts: Inv-Noodles, Inv-ChopSticks and Inv-Sweet/Sour. The opening amounts are: Inv-Noodles:  $455 \times 1.20 = 546.00$  EUR, Inv-ChopSticks:  $1,400 \times 0.27 = 378.00$  EUR and Inv-Sweet/Sour:  $1,320 \times 0.90 = 1,188.00$  EUR.

(1) Purchase of instant noodles at  $(1 + 10\%) \times 1.20 \times 5,000 = 6,600.00$  EUR.

<b>DR Purchase</b>	<b>6,600.00 EUR</b>
<b>DR VAT</b>	<b>1,320.00 EUR</b>
<b>CR Cash/Bank</b>	<b>7,920.00 EUR</b>

(2) Transfer to Inventory:

<b>DR Inventory</b> .....	<b>6,600.00 EUR</b>
<b>CR Purchase</b> .....	<b>6,600.00 EUR</b>

(3) Purchase of chop sticks at  $(1 + 10\%) \times 0.27 \times 6,000 = 1,782.00$  EUR.

<b>DR Purchase</b> .....	<b>1,782.00 EUR</b>
<b>DR VAT</b> .....	<b>356.40 EUR</b>
<b>CR Cash/Bank</b> .....	<b>2,138.40 EUR</b>

(4) Transfer to Inventory:

<b>DR Inventory</b> .....	<b>1,782.00 EUR</b>
<b>CR Purchase</b> .....	<b>1,782.00 EUR</b>

(5) Sale of instant noodles at  $(3,257 + (1 - 35\%) \times 1,500) \times (200\% \times (546 + 6,600) / 5,455) / 120\% = 9,239.80$  EUR.

<b>DR Cash/Bank</b> .....	<b>11,087.76 EUR</b>
<b>CR VAT</b> .....	<b>1,847.96 EUR</b>
<b>CR Sales</b> .....	<b>9,239.80 EUR</b>

(6) Inventory movement for noodles:  $(3,257 + 1,500) \times (546 + 6,600) / 5,455 = 6,231.63$  EUR.

<b>DR Cost of Sales</b> .....	<b>6,231.63 EUR</b>
<b>CR Inventory</b> .....	<b>6,231.63 EUR</b>

(7) Sale of chop sticks at:  $(198 + (1 - 35\%) \times 2,000) \times (200\% \times (378 + 1,782) / 7,400) / 120\% = 728.76$  EUR.

<b>DR Cash/Bank</b> .....	<b>874.51 EUR</b>
<b>CR VAT</b> .....	<b>145.75 EUR</b>
<b>CR Sales</b> .....	<b>728.76 EUR</b>

(8) Inventory movement for chop sticks:  $(198 + 2,000) \times (378 + 1,782) / 7,400 = 641.58$  EUR.

<b>DR Cost of Sales</b> .....	<b>641.58 EUR</b>
<b>CR Inventory</b> .....	<b>641.58 EUR</b>

(9) The return of cans is seen as an undoing of the business activity. It just can be reduced from the sales amount with regard to the bookkeeping entries.

Sale of soup cans:  $(253 - 108 + (1 - 35\%) \times 800) \times (200\% \times 0.90) / 120\% = 997.50$  EUR.

<b>DR Cash/Bank</b> .....	<b>1,197.00 EUR</b>
<b>CR VAT</b> .....	<b>199.50 EUR</b>
<b>CR Sales</b> .....	<b>997.50 EUR</b>

(10) Inventory movement for soups:  $(253 - 108 + 800) \times 0.90 = 850.50$  EUR.

<b>DR Cost of Sales</b> .....	<b>850.50 EUR</b>
<b>CR Inventory</b> .....	<b>850.50 EUR</b>

(11) Purchase of instant noodles at  $(1 + 10\%) \times 1.20 \times 5,000 = 6,600.00$  EUR.

<b>DR Purchase</b> .....	<b>6,600.00 EUR</b>
<b>DR VAT</b> .....	<b>1,320.00 EUR</b>
<b>CR Cash/Bank</b> .....	<b>7,920.00 EUR</b>

(12) Transfer of instant noodles to stock.

<b>DR Inventory</b> .....	<b>6,600.00 EUR</b>
<b>CR Purchase</b> .....	<b>6,600.00 EUR</b>

(13) Purchase of soups  $(1 + 10\%) \times 0.90 \times 2,000 = 1,980.00$  EUR.

<b>DR Purchase</b> .....	<b>1,980.00 EUR</b>
<b>DR VAT</b> .....	<b>396.00 EUR</b>
<b>CR Cash/Bank</b> .....	<b>2,376.00 EUR</b>

(14) Transfer to stock:

<b>DR Inventory</b> .....	<b>1,980.00 EUR</b>
<b>CR Purchase</b> .....	<b>1,980.00 EUR</b>

(15) Sale of instant noodles at  $(2,961 + (1 - 35\%) \times 2,000) \times (200\% \times (546 + 6,600 + 6,600 - 6,231.63) / (5,455 - 3,257 - 1,500 + 5,000)) / 120\% = 9,365.49$  EUR.

<b>DR Cash/Bank</b> .....	<b>11,238.59 EUR</b>
<b>CR VAT</b> .....	<b>1,873.10 EUR</b>
<b>CR Sales</b> .....	<b>9,365.49 EUR</b>

(16) Inventory movement for noodles:  $(2,961 + 2,000) \times (546 + 6,600 + 6,600 - 6,231.63) / (5,455 - 3,257 - 1,500 + 5,000) = 6,542.43$  EUR.

<b>DR Cost of Sales</b> .....	<b>6,542.43 EUR</b>
<b>CR Inventory</b> .....	<b>6,542.43 EUR</b>

(17) Sale of chop sticks at:  $(523 + (1 - 35\%) \times 2,500) \times (200\% \times (378 + 1,782 - 641.58) / (7,400 - 198 - 2,000)) / 120\% = 1,044.97$  EUR.

<b>DR Cash/Bank</b> .....	<b>1,253.96 EUR</b>
<b>CR VAT</b> .....	<b>208.99 EUR</b>
<b>CR Sales</b> .....	<b>1,044.97 EUR</b>

(18) Inventory movement for chop sticks:  $(523 + 2,500) \times ((378 + 1,782 - 641,58) / (7,400 - 198 - 2,000)) = 882.39 \text{ EUR}$ .

<b>DR Cost of Sales</b> .....	<b>882.39 EUR</b>
<b>CR Inventory</b> .....	<b>882.39 EUR</b>

(19) Sale of soup cans:  $(124 + (1 - 35\%) \times 900) \times (200\% \times ((1,188 + 1,980 - 850.50) / (1,320 - 253 + 108 - 800 + 2,000)) / 120\% = 1,106.04 \text{ EUR}$ .

<b>DR Cash/Bank</b> .....	<b>1,383.67 EUR</b>
<b>CR VAT</b> .....	<b>230.61 EUR</b>
<b>CR Sales</b> .....	<b>1,153.06 EUR</b>

(20) Inventory movement for soups:  $(124 + 900) \times ((1,188 + 1,980 - 850.50) / (1,320 - 253 + 108 - 800 + 2,000)) = 999.21 \text{ EUR}$ .

<b>DR Cost of Sales</b> .....	<b>999.21 EUR</b>
<b>CR Inventory</b> .....	<b>999.21 EUR</b>

Observe the accounts:

D				C				D				C			
Inv-Noodles								Inv-ChopSticks							
455	OV	546.00	(6)	6,231.63	4757	1.31	1400	OV	378.00	(8)	641.58	2198	0.29		
5000	(2)	6,600.00	(16)	6,542.43	4961	1.32	6000	(4)	1,782.00	(18)	882.39	3023	0.29		
5000	(12)	6,600.00	c/d	971.94	737	1.32				c/d	636.03	2179	0.29		
		<u>13,746.00</u>		<u>13,746.00</u>					<u>2,160.00</u>		<u>2,160.00</u>				
737	b/d	971.94					2179	b/d	636.03						

  

D				C				D				C			
Inv-Sweet/Sour								Purchase							
1320	OV	1,188.00	(10)	850.50	945	0.9	(1)	6,600.00	(2)	6,600.00					
2000	(14)	1,980.00	(20)	999.21	1024	0.98	(3)	1,782.00	(4)	1,782.00					
		<u>3,168.00</u>	c/d	1,318.29	1351	0.98	(11)	6,600.00	(12)	6,600.00					
1351	b/d	1,318.29		<u>3,168.00</u>			(13)	1,980.00	(14)	1,980.00					
								<u>16,962.00</u>		<u>16,962.00</u>					

  

D				C				D				C			
Cash/Bank								VAT							
OV			(1)	7,920.00			(1)	1,320.00	(5)	1,847.96					
(5)	11,087.76		(3)	2,138.40			(3)	356.40	(7)	145.75					
(7)	874.51		(11)	7,920.00			(11)	1,320.00	(9)	199.50					
(9)	1,197.00		(13)	2,376.00			(13)	396.00	(15)	1,873.10					
(15)	11,238.59								(17)	208.99					
(17)	1,253.96						c/d	1,113.51	(19)	230.61					
(19)	1,383.67							<u>4,505.91</u>		<u>4,505.91</u>					
									b/d	1,113.51					

  

D				C				D				C			
Cost of Sales COS								Sales							
in	(6)	6,231.63							(5)	9,239.80	in				
cs	(8)	641.58							(7)	728.76	cs				
s	(10)	850.50							(9)	997.50	s				
in	(16)	6,542.43							(15)	9,365.49	in				
cs	(18)	882.39							(17)	1,044.97	cs				
s	(20)	958.46	c/d	16,106.99				c/d	22,529.58	(19)	1,153.06	s			
		<u>16,106.99</u>		<u>16,106.99</u>					<u>22,529.58</u>		<u>22,529.58</u>				
b/d		16,106.99	T/A	16,106.99				T/A	22,529.58	b/d	22,529.58				

  

D				C			
Trading account T/A							
COS	16,106.99	Sales	22,529.58				
Gpc/d	6,422.59						
	<u>22,529.58</u>		<u>22,529.58</u>				
		b/d	6,422.59				

Exhibit 2: Accounts