Product Type	Notes
Manual / Pot and Pan Detergent- Quick Service Restaurant	1
Manual / Pot and Pan Detergent - Full Service Restaurant	1
Manual / Pot and Pan Detergent - Food Retail	1
Manual / Pot and Pan - Power Wash Application	1
Machine Warewash	2
Laundry Detergent - Limited Service Lodging	3
Laundry Detergent - Full Service Lodging	3
Laundry Detergent - Industrial Laundry	3
Laundry Manual Prespotter	3
	3
Hand Soap - Food Service Operation	4
Hand Soap - Facility Operation	4, 5
Specialty Manual Cleaner - Commercial Operation	4, 5
Floor Finish or Cleaner - Commercial Operation	4
	4, 5

Note

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Manual pot and pan wash frequency is typically after meal preparation and serving rushes throughout operation hours depending on tl
Wash duration can be 10mins-45mins at a time per observations surveys: Estimate 30 minutes
For some equipment the Standard Operating Procedures states that ware items used for preparing and serving food should be cleane
Food code says minimum wash temp should be 110F unless another temp is stated by the manufactuer on the label.

Manual Pot and Pan Power Wash applications utilize a water agitation/ recirculation to wash ware in a large volume sink. The derma

Machine Warewash (automatic dishmachine) applications are close-loop dispensing systems.
Typical Machine Warewash Detergent and Sanitizer chemical products would not contain 1,4-Dioxane. Rinse Additives m
Rinse Additives may contain trace levels, but are injected at 1 mL or less per wash cycle.
FDA / NSF has oversight of Rinse Additive applications as indirect food additives
1,4-Dioxane levels of commercial rinse additives (as sold) will be < 1 ppm.

Typical commercial laundry machines operate at high and low water levels during wash cycle steps. Detergent steps are normally at t
Dermal exposure for laundry detergent application is **NOT** expected. Normal commercial and industrial laundry wash cycles consist c
Laundry product is automatical dispensed into a laundry machine from a closed-loop dispensing system
The use solution concentration used for the inhalation exposure calculation was derived from the highest recommended concentration
Normal commercial and industrial laundry wash cycles consist of various wash, bleach, and rinse steps that are designed to end with

Application	Primary Mode of Exposure	Secondary Mode of Exposure	Typical 1,4-Dioxane ppm in Concentrate
Sink / Immersion	dermal	Limited inhalation	4
Sink / Immersion	dermal	Limited inhalation	4
Sink / Immersion	dermal	Limited inhalation	4
Sink / Immersion	dermal	Inhalation	2
Closed-Loop	inhalation	None	1
Closed-Loop	inhalation	None	1
Closed-Loop	inhalation	None	2
Spray	inhalation	Limited Dermal	1
Hand / Immerse	dermal	Limited inhalation	0.4
Hand / Immerse	dermal	Limited inhalation	0.4
Spray	inhalation	Limited Dermal	2
Mop	inhalation	Limited Dermal	1

he type of operation

d every four hours when in use (this is dictated by Food Code).

l exposure may be reduced as this process is semi-automatic

ay contain trace levels, but are injected at 1 mL or less per wash cycle.

the low water level. A 100-lb. laundry machine at the low water level will have approximately 17 gallons of wat
f various wash, bleach, and rinse steps that are designed to end with less than 31-ppm residual alkalinity in th

of 9 oz detergent / 100 lbs. of laundry.
less than 31-ppm residual alkalinity in the rinse water at the final rinse.

Highest Recommended Dilution Factor	Typical 1,4-Dioxane ppm in Use-Solution	Applications per 8-hour shift	Total Volume of PRODUCT Use-Solution at high dose per 8-hour shift (mL)
0.0015000	0.006	6	150
0.0015000	0.006	3	90
0.0015000	0.006	2	60
0.0015000	0.003	2	40
0.00414	0.00414	4	2400
0.00414	0.00414	4	2400
0.0055	0.011	8	2850
1	1	12	30
1	0.4	8	8
1	0.4	4	4
0.0625	0.125	4	250
0.025	0.025	5	2000

er. Therefore, 9 oz / 17 gallons = 0.00414 dilution factor.

e rinse water at the final rinseNo residual product is expected at the end of a wash cycle

Typical Application Water Temp (F)	Potentail Exposure Time to PRODUCT per 8-hour shift (hours)
100	3
100	1.5
70	1
100	1
140	4
140	4
140	8
70	1
70	0.044
35	0.022
70	0.133
100	0.8333

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Possible Factors for Exposure Estimates

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No residual product is expected to remain on linen at the end of a wash cycle.
Effluent from a commercial or industrial laundry machine goes directly to sewer system or an on-site treatment system.
Any exposure would be through possible aerosolization in the wash wheel / wash tunnel and effluent discharge that would be vented d
Industrial textile washing utilizes a continuous batch process with several stages of rinses and chemcial treatment over a larger size o
Detergent dosing recommendations vary but for industrial, will use 12 oz / CWT

Laundry Prespotter products are usually directly added to a soak tub or solution. They can be sprayed directly onto linen as well. The
Estimate 2.5 mls per spray

Typical dispense volume for manual or touchfree hand soap dispensers is 1 mL

There are various specialty products that may contain 1,4-Dioxane. These include degreasers, multi-surface cleaners, air fresheners
Application estimates are generalize for this summary

Floor cleaner and or resiliant floor finish products may contain 1,4-Dioxane
Applications may vary
Floor cleaners may be applied manually by mop and mop bucket or through auto-scrubber applications
Dermal and inhalation routes of exposure would vary depending on application method and temerature
Auto-scrubbers typically have a HEPA filter on the exhaust system and chemical contact is minimized through closed-loop

Volume of PRODUCT used per application
Number of applications per day
Concentration of 1,4-Dioxane in PRODUCT or USE-SOLUTION
Hours of PRODUCT use per application
Evaporation Rate of 1,4-Dioxane from PRODUCT
Area of surface in Application Room
Height of Ceiling in Application Room
Average human weight of user
Fraction of PRODUCT remaining on skin
Absorption rate on skin
Inhalation rate

uring the wash cycle
f operation

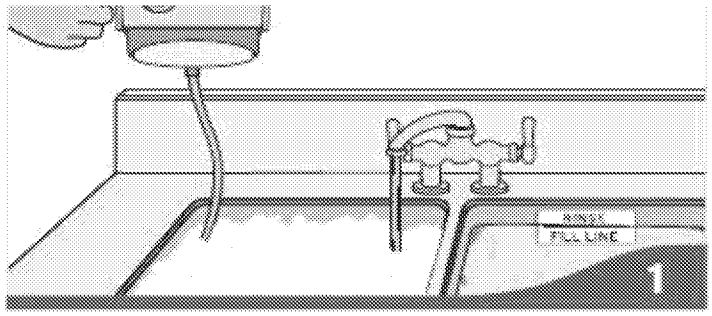
e expected routes of exposure are inhalation and dermal.

and carpet cleaners/spotters

› chemical dispensing and draining

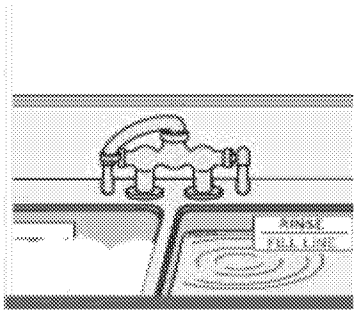
1,4-Dioxane Levels in Commercial and Consumer Products

Product Type	Independent Lab	Company D Initial	Company D Re-Test (+30 Days)
with AES	1,4-Dioxane ppm	1,4-Dioxane ppm	1,4-Dioxane ppm
Hand / Manual Dish 30%	3.6	4.2	4.2
Consumer Laundry 15%	1	0.9	1.3
Hand / Manual Dish 15%	1.9	2.2	2.3
Consumer Laundry 30%	2.7	2.7	2.7
I&I Laundry 50%	0.94	1.2	1.3



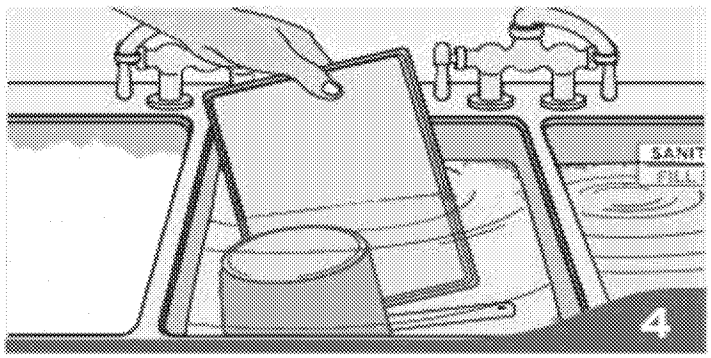
Push button on manual pot and pan dispenser to dispense detergent. Fill wash sink to fill line with hot water.

Presione el botón en el dispensador manual para ollas y sartenes para dispensar detergente. Llene el fregadero de lavado con agua caliente hasta la línea de llenado.



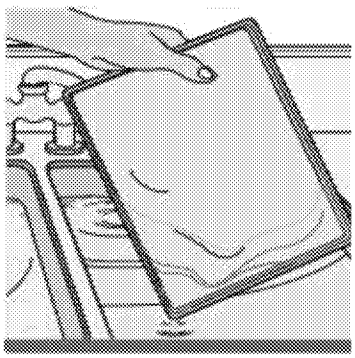
Fill rinse sink with hot water.
EPA-registered sanitizer sol
follow the directions for use o

Llene el fregadero de enjuag
Llene el fregadero para desi
desinfectante registrada por
cuidadosamente las instrucc
etiqueta del producto.



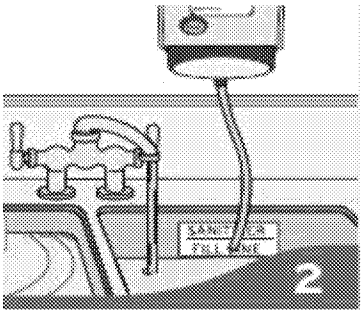
Submerge in hot water rinse and allow excess water to run back into rinse sink.

Sumerja en agua caliente de enjuague y permita que el exceso de agua escurra de nuevo al fregadero de enjuague.



Submerge in sanitizer sink f
specified by product label an

Sumerja en el fregadero par
minuto o durante el tiempo
producto y/o indicado por la



Fill sanitizer sink with an
ution. Carefully read and
n the product label.

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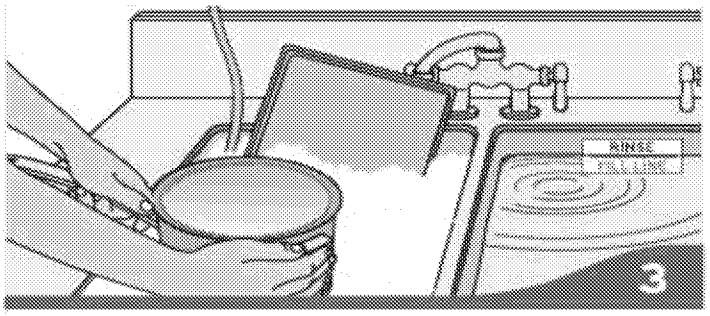
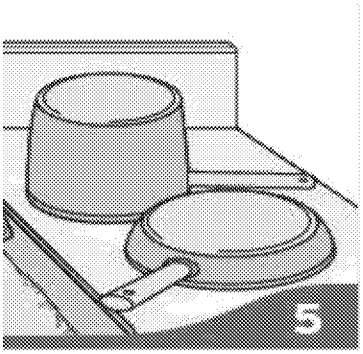
nfectar con una solución
el EPA. Lea y siga
iones de uso en la



Pre-scrape pots and pans. Soak for at least 5-10 minutes depending on soil level. Scrub all surfaces and allow excess water to run back into wash sink.

Raspe primero las ollas y los sartenes. Remoje durante 5 a 10 minutos dependiendo del nivel de la suciedad. Friegue todas las superficies y permita que el exceso de agua escurra de nuevo al fregadero de lavado.



or one minute or as
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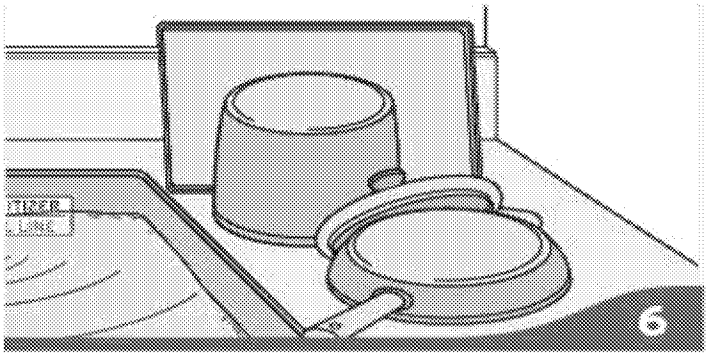
especificado en el rótulo del
s directrices locales.



Turn upside down to air dry. Do not wipe dry.

Invierta y deje secar al aire. No secar con un trapo.

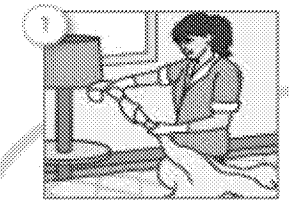
TIP: Refill sink every two hours or as directed by local guidelines and/or packaging instructions.

CONSEJO: Vuelva a llenar el fregadero cada dos horas o de acuerdo a las directrices locales y/o a las instrucciones del envase.

Laundry Training Guide

Guía de Entrenamiento de Lavandería

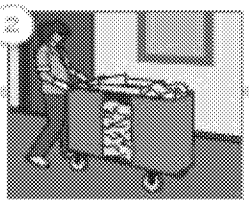
COLLECTION
RECOLECCIÓN



Separate stained linen into collection bags or by tying knots to enable Laundry Operator to identify soiled linen.

Separar la ropa de cama manchada en bolsas de recolección o atando nudos para permitir que el operador de lavandería identifique la ropa de cama manchada.

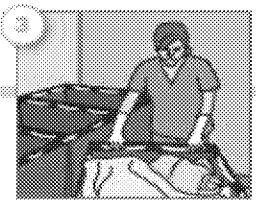
TRANSPORT
TRANSPORTE



Soiled linens should be transported in cart without being overfilled.

La ropa de cama sucia se debe transportar en un carro sin cargarlo en exceso.

SORTING
CLASIFICACIÓN



Sort by linen type to select proper formula. Separate stained linen to pre-treatment.

Ordenar según el tipo de ropa de cama sin seleccionar el método de lavado a Separar la ropa de cama manchada pretratamiento.

STAIN MANAGEMENT
TRATAMIENTO DE MANCHAS

Stains are the #1 cause of linen replacement. StainBlaster is formulated to eliminate tough stains, extending linen life while reducing waste, water & energy and overall costs.

Las manchas son la principal causa del reemplazo de la ropa de cama. StainBlaster™ está formulado para eliminar manchas difíciles, lo que prolonga la vida útil de la ropa de cama, mientras reduce los residuos, el agua y la energía, y los costos totales.

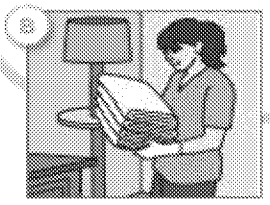
PRE-TREAT
TRATAMIENTO PREVIO

Spray StainBlaster™ Pre-Spotter product directly on stained area of linen.

Rociar el quitamanchas para proteínas StainBlaster™ directamente en el área manchada de la ropa de cama.

Po
directly

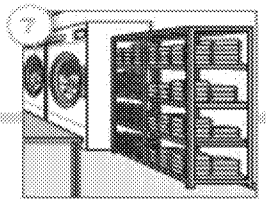
USE
USE



Move laundry to cart taking care not to overload cart. In quest room, place laundry on clean, hard surface while replacing linens in room.

Colocar la ropa en el carro, sin sobrecargarlo. En la habitación de huéspedes, colocar la ropa sobre una superficie dura y limpia, mientras cambia la ropa de cama en la habitación.

STORE
ALMACENE



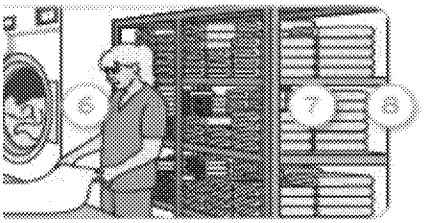
Stack folded laundry neatly in appropriate location, taking care to place older laundry in most accessible position.

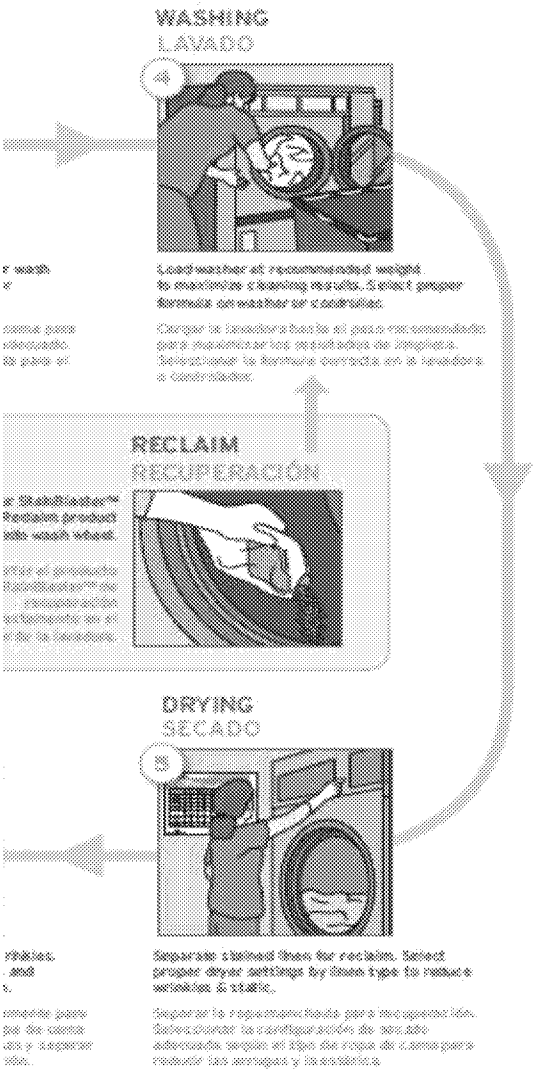
Apilar la ropa plegada de manera prolija en un lugar adecuado, procurando colocar la ropa anterior en un lugar más accesible.

FOLD
DOBLE

Fold linen immediately to avoid w inspect linens carefully for stains separate stained linen for reclaim

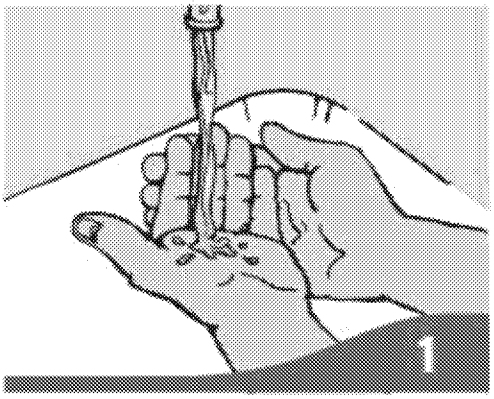
Doblar la ropa de cama inmediata evitar arrugas. Inspeccionar la ro con cuidado para detectar manch la ropa manchada para recuperar




WASHING
LAVADO
RECLAIM
RECUPERACIÓN
DRYING
SECADO

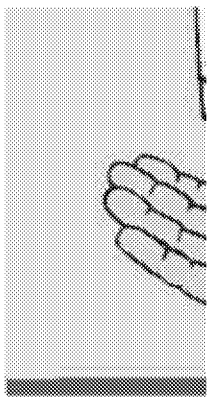
Proper Hand-Washin

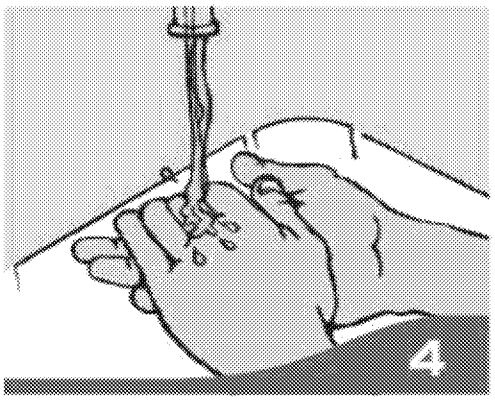
PROCEDIMIENTOS DE LAVADO DE MANOS



Wet your hands with hot, running water (at least 100°F/38°C).

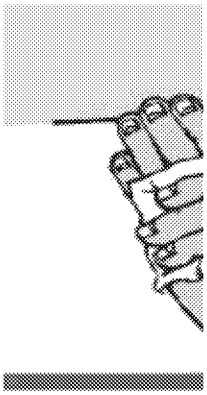
Mójese las manos con agua corriente caliente (al menos, a 100°F/38 °C).





Rinse thoroughly under running water.

Enjuáguese las manos completamente con el agua corriente.



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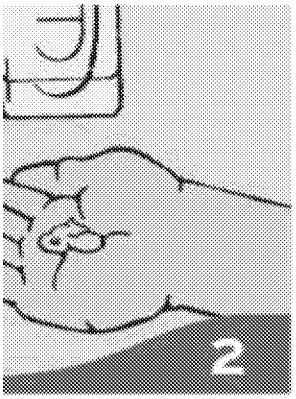
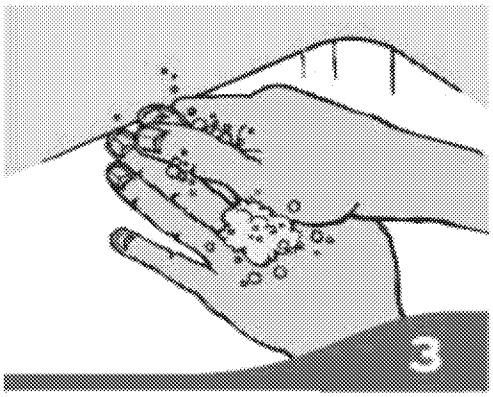


Apply soap.

Aplíquese el jabón.



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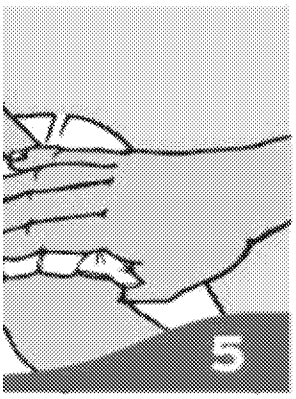
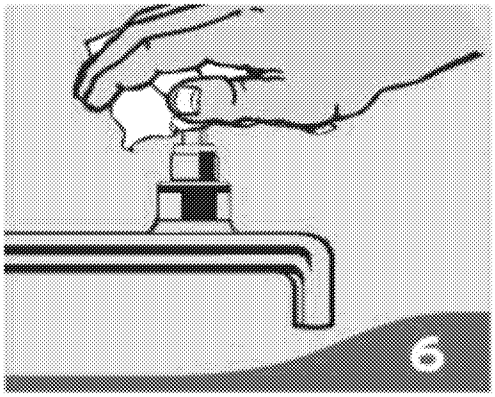


Dry hands and arms with a single-use paper towel.

Séquese las manos y los antebrazos con una toalla de papel descartable.



Turn pap

Cier toal

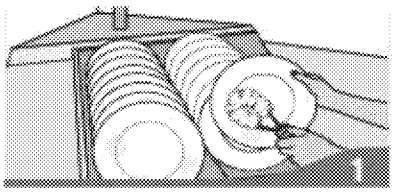
ub hands and arms
at least 20 seconds.
an under fingernails
between fingers.

ese las manos y los
zos por lo menos
nte (20) segundos.
ese debajo de las
s y entre los dedos.

n off faucet using
er towel.

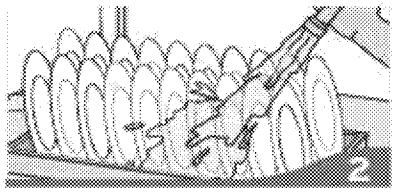
rre el grifo con la
lla de papel.

WASHING LAVADO



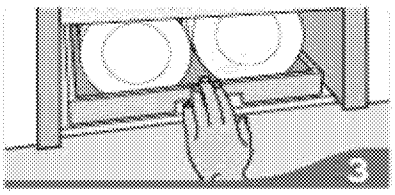
Hand scrape and rack dishes.

Raspe a mano y coloque la vajilla en bastidores.



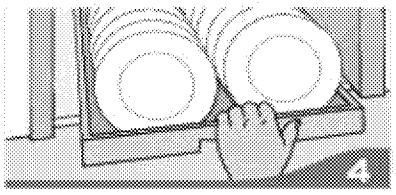
Pre-rinse dishes.

Preenjuague la vajilla.



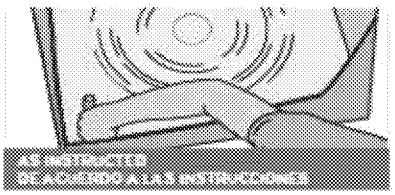
Open door, place rack into machine and close the door.

Abra la puerta, coloque el bastidor en la máquina y cierre la puerta.



Remove the rack after cycle and allow drying.

Extraiga el bastidor después del ciclo y permita que seque.



Dump and fill wash tank with fresh water on a regular basis to control salt.

Vacíe y llene el tanque de lavado con agua limpia a intervalos regulares para controlar la salinidad.